FIRE ENGINEERING

OHIO STATE UNIVERSITY
NOV 25 1952
LIBRARY

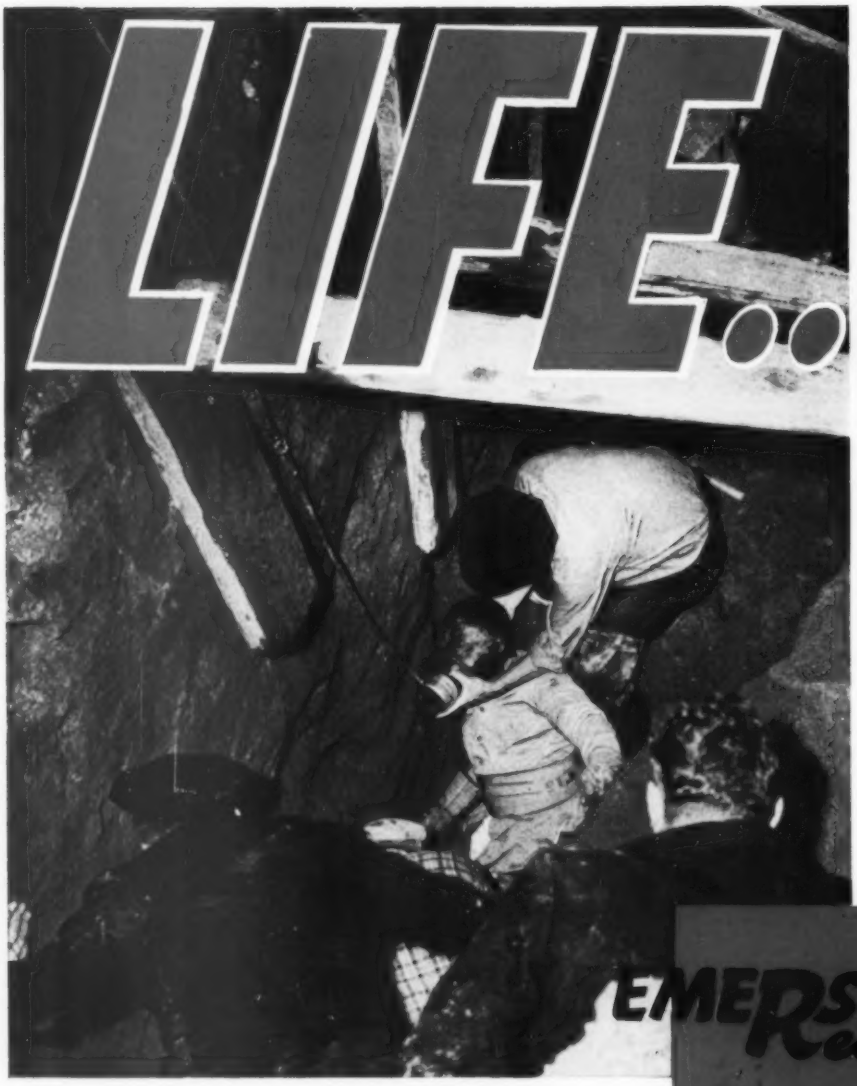
The Journal of the Fire Protection Profession Since 1877

NOVEMBER, 1952

Grain elevator fires prove difficult ones to control. Only available openings for fire streams are in head house over grain storage bins. The loss at this Denver, Colo., fire which occurred on October 26, 1952, was well over a half-million dollars. Feed mill is at extreme right.

A CASE · SHEPPERD · MANN PUBLICATION

LIFE...LINE



to a victim
in a cave-in

. . . or in a
collapsed
building or
mine shaft

. . . trapped
by machinery
or under an
overturned
vehicle . . .

in a tank or
the hold of
a ship . . .

Photo of rescue recorded by the PHILADELPHIA INQUIRER

EMERSON Resuscitator

From hundreds of feet away **EMERSON EXTENSION HOSES** can bring the breath of life to trapped victims, saving lives you could not reach with bulkier equipment. They connect instantly to standard Emerson models, and add new life-saving power to the equipment you already have. Ask your Emerson representative, or drop us a line at the factory.

Emersons are **SIMPLE** to operate and **SAFE** for adults, children, or infants. They are **ACCEPTED** by the American Medical Association (since 1942) for use **BY LAYMEN**. They **PROVIDE SUCTION,** alternating with the pressure phase, to give vital aid to the circulation.

J. H. EMERSON CO.

88 COTTAGE PARK AVE., CAMBRIDGE, MASS.

Do you, as a responsible public official, hold the fate of your city's people in your hands? Where is the air raid warning system you should have provided or sponsored? Their lives and yours may depend on it!

Now, while yours might not *seem* to be a primary target area, at the first serious threat of bombing or a bombing even half a continent away, your people will demand to know why they do not have warning protection. Recriminations will fly; officials' heads will roll. It's worth serious thought...right now! Your future...in *more ways than one*...depends on it! With matching funds and Federal Enterprises planning, this vulnerability is easily rectified...right now!

Nothing less than a properly-engineered system will do the necessary job and will show your people that you have taken the proper measures to insure their safety. The system chosen by over 200 alert cities is Federal!

Federal Sirens are available for every required application. The mighty Thunderbolt Siren covers large areas. Federal Vertical Sirens fill in areas. Federal fractional horsepower sirens protect confined areas and give supplementary warning in public buildings and industrial plants.

Write NOW for Bulletin 97 for assistance in this most VITAL matter today.

FEDERAL ENTERPRISES, INC.

FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

8702 SOUTH STATE STREET CHICAGO 19, ILLINOIS

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

CONTENTS

Vol. 105 — November, 1952 — No. 11

	Page
With the Editor — By Fred Shepperd	925
Concealed Spaces Present Major Problem in Fire Attack — By Roi B. Woolley	926
Practical Fire Service Rescue — By Joe Mahaffey	930
Fire Prevention Week Drive Continues to Get Results — A Staff Report	933
New York City Opens Bids for New Dual-Powered Fireboat — By Jerry Daly	936
The Watch Desk — By Roi B. Woolley	941
News of the Manufacturers	942
Short Cuts and Gadgets	946
The Round Table — Out-of-Town Aid	948
False Alarms	950
What's Burning?	952
World-Wide Fire News — By Roi B. Woolley	955
Among the Buffs — By Paul C. Ditzel	958
Persons in the News	961
Obituaries	963
Questions and Answers	964
Book Shelf	980
With Our Readers	980

MEMBER
Audit Bureau of Circulations
Associated Business Publications

Viewpoints

THE national presidential election is over. A lot of people found their viewpoints didn't quite coincide with those of their fellowman.

● Judging an engineering publication, especially one devoted to the big business of fire protection and prevention, is a bit like judging a candidate for office. There may be differences of viewpoint and opinion on questions of policy and publication.

● Fortunately for FIRE ENGINEERING, however—if we are to judge by what its readers and advertisers—and other competent authorities say about it, the differences in opinion and viewpoint are so fine as to be almost negligible.

● This unanimity of acceptance of its publishing policies, programs and principles, has endured for three-quarters of a century. In its 75 years this Journal has witnessed over a score of national elections; has seen presidents come and go; has weathered recessions and depressions as well as enjoyed tides of prosperity. It has seen the launching of hundreds of new fire departments, and the re-creation of hundreds of others.

● Presidents and fire chiefs will come and go, but the nation's fire service will endure—will continue to grow, to go forward, to improve.

● The vote seems to be pretty unanimous that FIRE ENGINEERING will also continue to serve and support this fire service through those future presidential administrations.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Wastes Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.50 a year; Foreign, $4.50; Single copies, 40c. ¶Member of Audit Bureau of Circulations and Associated Business Publications, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 5, 1879.

¶Contents of this issue copyrighted, 1952, by Case-Shepperd-Mann Publishing Corp.

President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representatives, WILLIAM J. GIBSON, ALFRED J. HOUGHTON; CHICAGO OFFICES L. M. ROCHE and ROBERT D. CLEVENGER, 8 So. Dearborn St., Chicago 3, Ill.; LOS ANGELES; AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U.S.A.

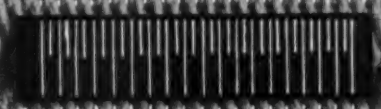
A CASE-SHEPPERD-MANN PUBLICATION
"*Specialized* Leadership"

THIS IS

DOUBLE SURFACED TWILL WOVEN FABRIC

FIRE HOSE

Outside 20 Cords Per Inch



Inside 10 Cords Per Inch

2 8 8 TWILL

2 8 8 TWILL

DOUBLE SURFACE MEANS

DOUBLE SERVICE

DOUBLE WEAR RESISTANCE

DOUBLE PROTECTION

DOUBLE VALUE

FABRIC FIRE HOSE CO.

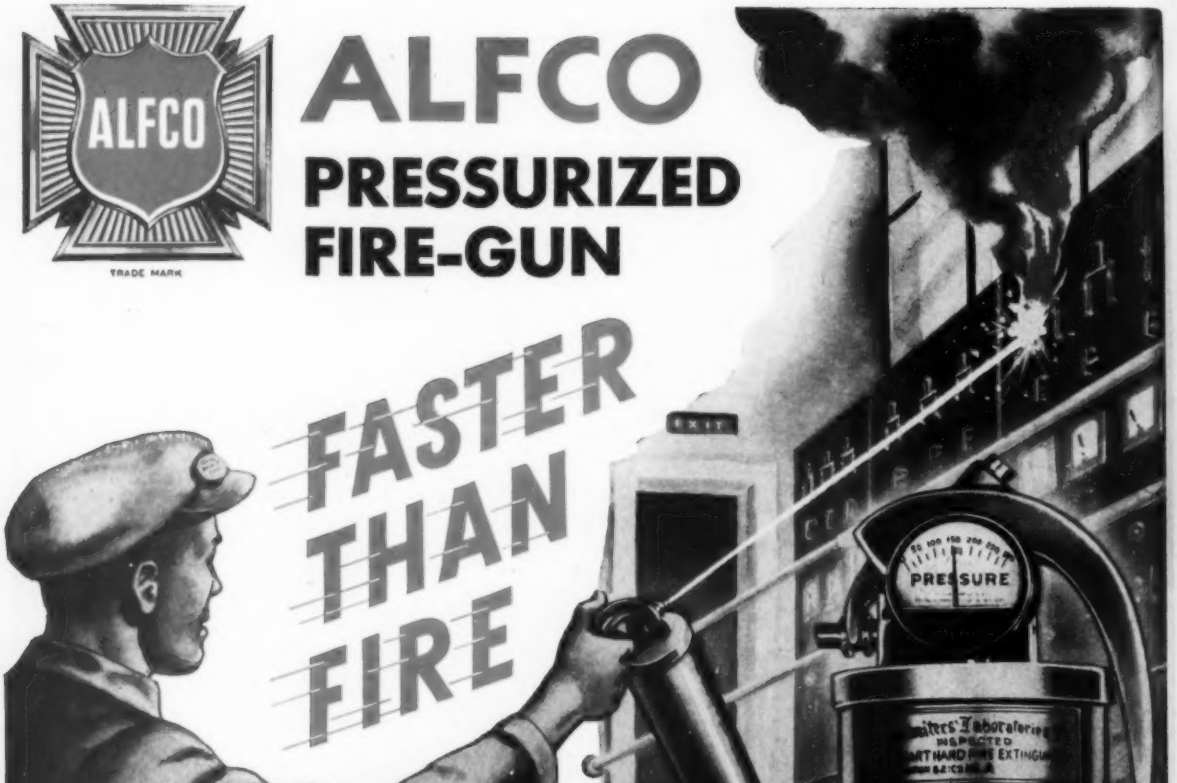
1869 SANDY HOOK, CONN. 1952

ALFCO

TRADE MARK

ALFCO PRESSURIZED FIRE-GUN

FASTER THAN FIRE

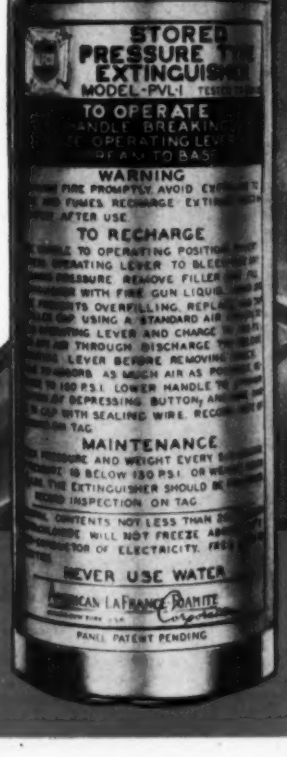


You can pin-point your fire target with the Alfco 1 Qt. Pressurized Fire-Gun! It stops incipient electrical fires with trigger fast action.

No pumping—just aim, press the trigger and a zipping stream of fire-smothering Fire-Gun Fluid stops the blaze. It will snuff out both Class B and Class C incipient fires with swift effectiveness.

It can be operated with one hand. The trigger mechanism can be worked easily by operators wearing heavy work gloves, or mittens.

Compressed air expelled, the Pressurized Fire-Gun has an excellent striking range of 25 to 30 feet. 95% of its contents can be discharged from any held position within 15° of horizontal. The unit is easily recharged with a standard air chuck exerting 150 psi. Inspected and approved by Underwriters' Laboratories. Write for fully illustrated literature.



AMERICAN-LAFRANCE-FOAMITE Corporation

ELMIRA · NEW YORK · U.S.A.

OUR 2nd Century of Leadership in FIRE PROTECTION

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER

Left to right: Nelson Hennings, Joseph Pucci, Chief Walter Zempke

800 extra feet of B. F. Goodrich hose racked on this truck

"Recently we took delivery on a new fire truck," reports Chief Walter Zempke, of Brooklyn, Ohio. "It's designed to carry 1200 feet of standard hose, but we specified B. F. Goodrich Fire King hose because of its light weight and flexibility. Now we're racking 2,000 feet of Fire King on our truck bed, and the *extra* 800 feet saves us vital minutes when we're laying lines at a fire."

Lighter, more flexible—Fire King hose is 15% lighter, much more flexible than other hose because of a new chemically-produced fiber now used exclusively as "filler" cords — the reinforcing cords that go *around* the hose and carry the load under pressure. As a result, Fire King is easy to handle, light to carry, and can be coiled quickly into a compact roll. Designed to resist kinking and twisting, it racks naturally on the truck bed, saves loading time.

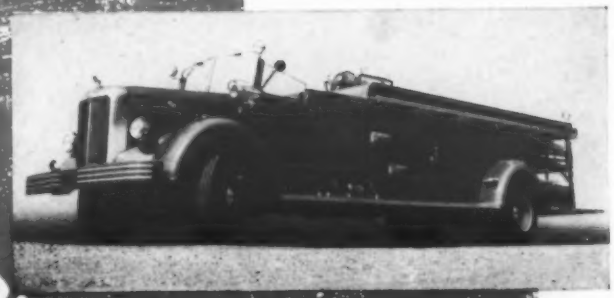
50% stronger—Actual service tests prove that Fire King, tested to 600 pounds pressure, is 50% stronger than standard fire hose which is tested to only 400 pounds pressure.

100% more strength in coupling area—The coupling area is the danger zone in fire hose. That's where, in ordinary hose, cracks and blowouts occur, due to pressure, flexing, strain. In B. F. Goodrich hose this cause of hose failure has been eliminated by adding an extra layer of hard-woven cords that extends 12" back from each end of the hose. This exclusive, patented B. F. Goodrich feature (U. S. Patent No. 1,919,356) adds 100% more strength to the coupling area, yet this added protection costs nothing extra. Not one single length of B. F. Goodrich hose with end protection has ever failed in the coupling area.

Before you buy another length of fire hose, let your nearby BFG Fire Hose Distributor show you a sample of Fire King and quote on your requirements. You'll find that although the initial cost of Fire King is slightly higher, it's really your most economical buy because it lasts longer. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, O.*

Fire Hose
BY
B.F.Goodrich

Type 85 (Front) 75 ft. Aerial with 750 GPM Pump

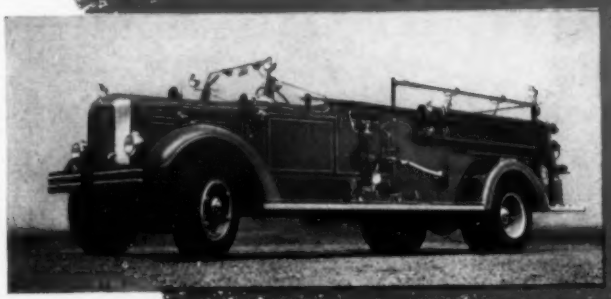


Type 85 City Service Ladder Truck with Booster System

Modernize with Mack

Type 85—750 GPM Triple Combination Pumper

Type 685W—6 x 6 Airport Crash Truck



Type 505A—[illegible] GPM Triple Combination Pumper

Type 606A—Triple Combination Pumper

Mack
FIRE APPARATUS

MACK MANUFACTURING CORPORATION
Fire Apparatus Division
Allentown, Pennsylvania

Factory branches and distributors in all principal cities for service and parts. In Canada, Mack Trucks of Canada, Ltd.

TRIPLE COMBINATION PUMPERS—500 TO 1250 GPM...SQUAD AND HOSE CARS...65', 75' and 85' AERIALS, CITY SERVICE AND COMBINATION LADDER TRUCKS

Fire Fig

Fog

Just
Strengt
water,
death t
It d
Rockw
it into
far gre
action
chemic
ment.
Tan
— fires
fires ir
— are

Fire Fighter here discharges FogFOAM onto burning gasoline through 2½" FFF Nozzle.

FogFOAM *puts smothering blanket over flaming liquids*

Rockwood Nozzle Turns out Perfect Proportions of Foam, Air and Water to put out highly volatile flammable liquids; action is instant

Just 3 parts of Rockwood Double Strength Foam added to 97 parts of water, and you've a special "mix" that's death to fire.

It does its job through a special Rockwood FogFOAM nozzle that turns it into smothering FogFOAM. You get far greater fire fighting extinguishing action than ever possible with old style chemical or mechanical foam equipment.

Tank-truck and airplane crash fires — fires aboard ocean going tankers — fires in refineries and industrial plants — are quickly and effectively smothered.

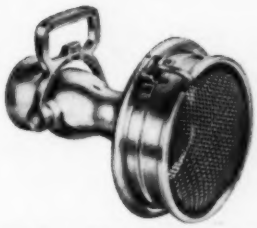
What's more, Rockwood Double Strength FOAM is faster spreading, flows freely at sub-zero temperatures, will not corrode and can be easily washed away after fire is extinguished.

Rockwood proportioning systems automatically control ratio of FOAM liquid to water ensuring proper proportioning regardless of number of nozzles used. They can be custom engineered to your requirements.

Plan now to have a Rockwood Engineer recommend the right fire fighting equipment to meet your needs. Mail coupon below.

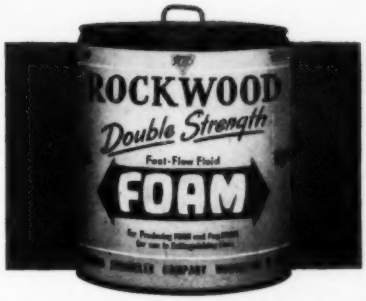
ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses



Rockwood Type FFF FogFOAM Nozzle with FogFOAM Screen available for service on 1½", 2½", 3½" fire hose lines. Nozzles discharge Solid FOAM (with shaper), and High Velocity WaterFOG as well as FogFOAM (with screen). Range of FogFOAM with shaper approximately 60 feet, with screen 30 feet.

Fleet of Tankers is equipped with FFF Nozzles and proportioning system. Shown here, FogFOAM being discharged on deck and water during test. Ships must be protected from spill fires on water as well as aboard ship.



Rockwood Double Strength Foam — available in 5 gallon cans or 50 gallon drums. Tested by Underwriters' Laboratories.

SEND FOR THIS ILLUSTRATED CATALOG

ROCKWOOD SPRINKLER COMPANY
54 HARLOW STREET
WORCESTER 5, MASS.

Please send me Rockwood's illustrated catalog on the complete line of cost cutting, efficiency-boosting products for modern fire fighting.

Name.....

Title.....

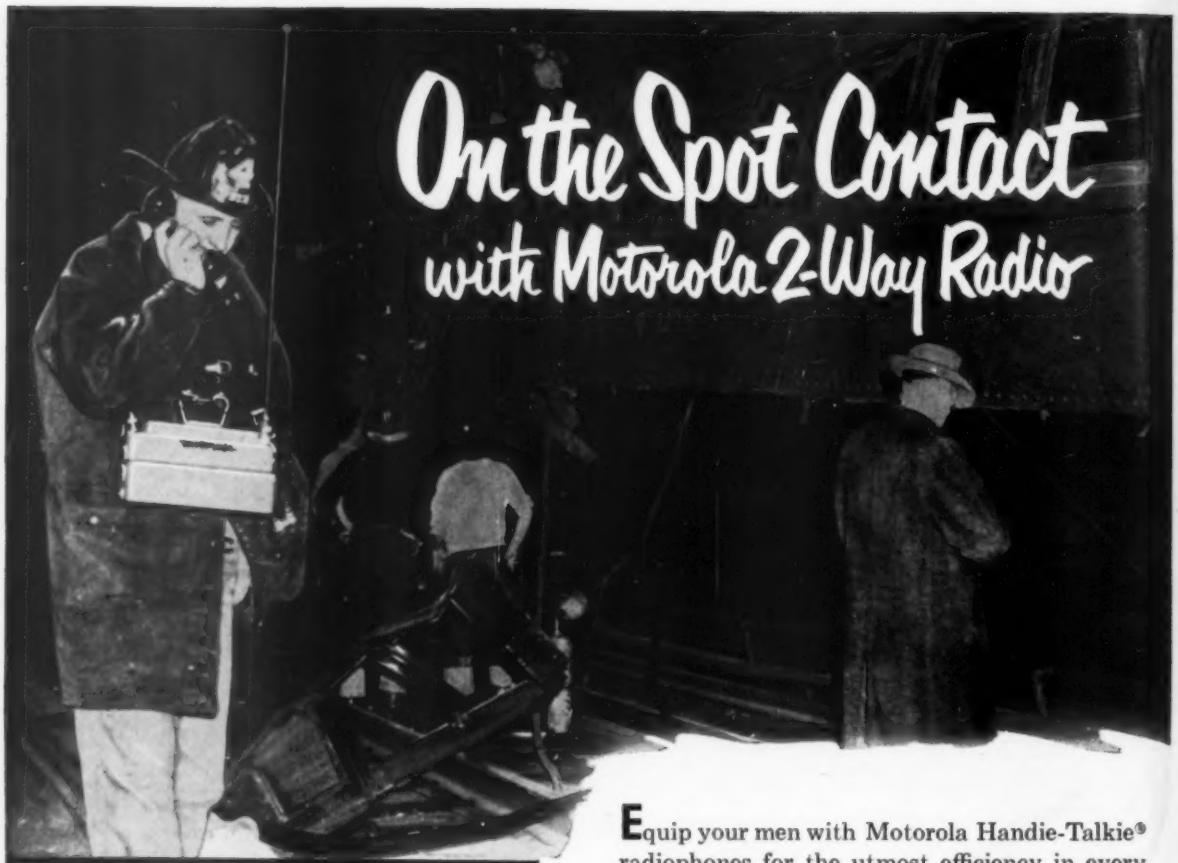
Company.....

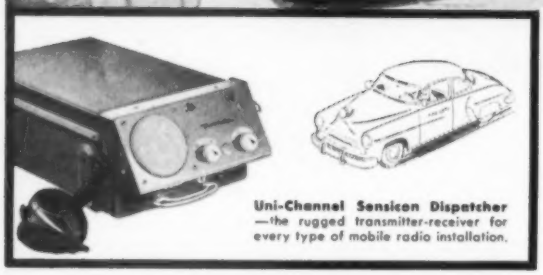
Street.....

City.....

Zone.....State.....

On the Spot Contact with Motorola 2-Way Radio





Uni-Channel Sensicon Dispatcher—the rugged transmitter-receiver for every type of mobile radio installation.

Portable Pack Set—long-life battery-operated-2-way radio for on-the-spot contact.

Pack Set Power Supply—for operating Pack Sets from 117-volt AC lines and 6-volt DC batteries. Here's extra value and greater versatility for your system!

Equip your men with Motorola Handie-Talkie® radiophones for the utmost efficiency in every crisis. Call for men and equipment with the split-second timing so essential to modern fire-fighting technique. Rugged, weather-proof Motorola mobile systems are now bringing lightning communication to almost three-fourths of the fire departments in the country. Handie-Talkie 2-way radios and portable Pack Sets link with mobile units, extending radio coverage to the most remote and inaccessible places. For fast action, flexibility and complete radio networks Motorola offers you outstanding mobile radio value. And remember . . . specify Motorola for lasting performance, minimum maintenance and truly obsolescence-free equipment. Write today for full information on radio equipment for your system.

Motorola®

Communications and Electronics Division
4545 Augusta Blvd., Chicago 51, Illinois
Rogers Majestic Electronics Ltd., Toronto, Canada

Knock Out FIRES FASTER with

JOHN BEAN *two-fisted* FIRE-FIGHTER

Here's a truck that goes into action power-packed. It incorporates the quick knock-out punch of the famous Bean High-Pressure system and the fire-beating wallop of the new Bean Volume Pump. Both pumps operate together or separately, so you have at your command two lines of fast-striking high pressure fog and 3 lines of slugging volume power. Make sure your community gets all the protection it needs. Investigate this Bean Two-Fisted Fire-Fighter today.

Write for this complete story on the John Bean High-Pressure Fog and Volume Fire-Fighter.

John Bean Division
Dept. 126
Lansing 4, Michigan

•

John Bean Division
P. O. Box 145
San Jose, California

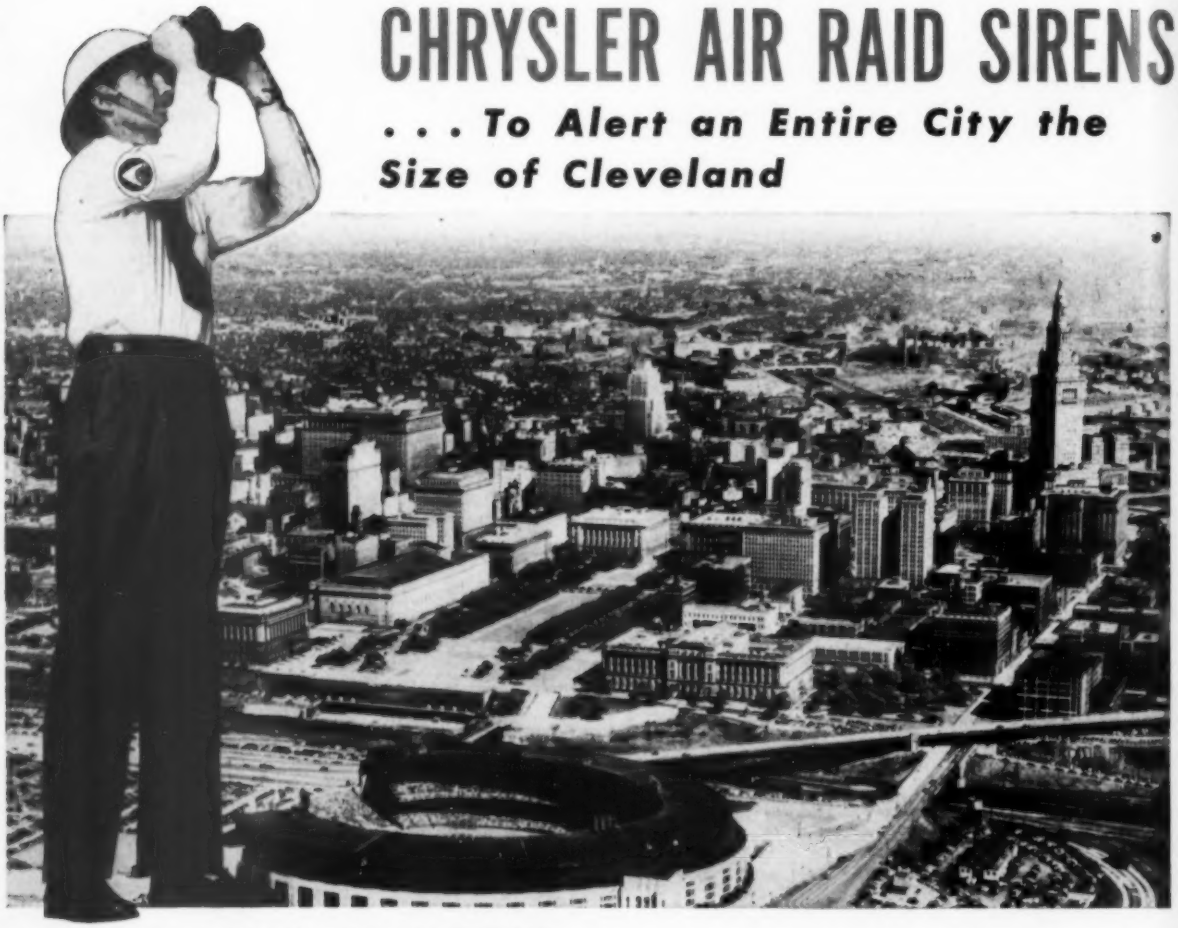
JOHN fmc BEAN

TWO-FISTED FIRE-FIGHTERS

Can be mounted on most standard truck chassis

A PRODUCT OF FOOD MACHINERY AND CHEMICAL CORPORATION

Just 23
CHRYSLER AIR RAID SIRENS
. . . To Alert an Entire City the Size of Cleveland

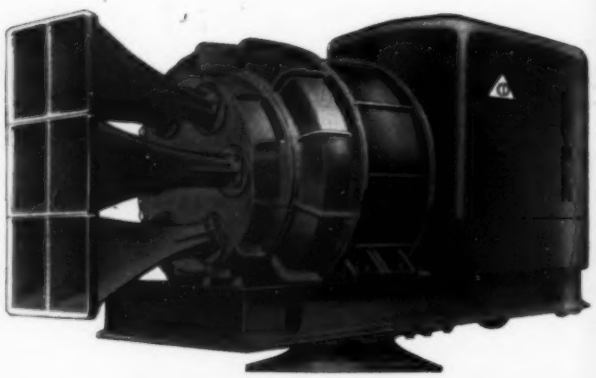


IN SECONDS . . . an entire city of nearly 1,000,000 people spread out over a seventy-five square mile area can be warned of impending danger. And if the city were spread out in the same manner as Cleveland, Ohio, a remote-controlled system of just twenty-three Chrysler Air Raid Sirens could do the basic job. Compare this number with the necessary quantity of any other warning device and you will understand the importance of selecting Chrysler . . . the Siren sounding the "loudest warning ever heard."

Smaller communities too will find the Chrysler Siren ideal for their protection . . . because, thanks to its own individual power plant, the Chrysler Siren can be operated manually, independent of any system, from a fixed location or from a moving truck or boat.

The mighty 180 horsepower V-8 Chrysler Industrial Engine powering the Chrysler Siren enables it to develop 138 decibels of sound, 100 feet from its throat. Under favorable conditions this shrill voice can be heard anywhere within an *eight-mile circular area.*

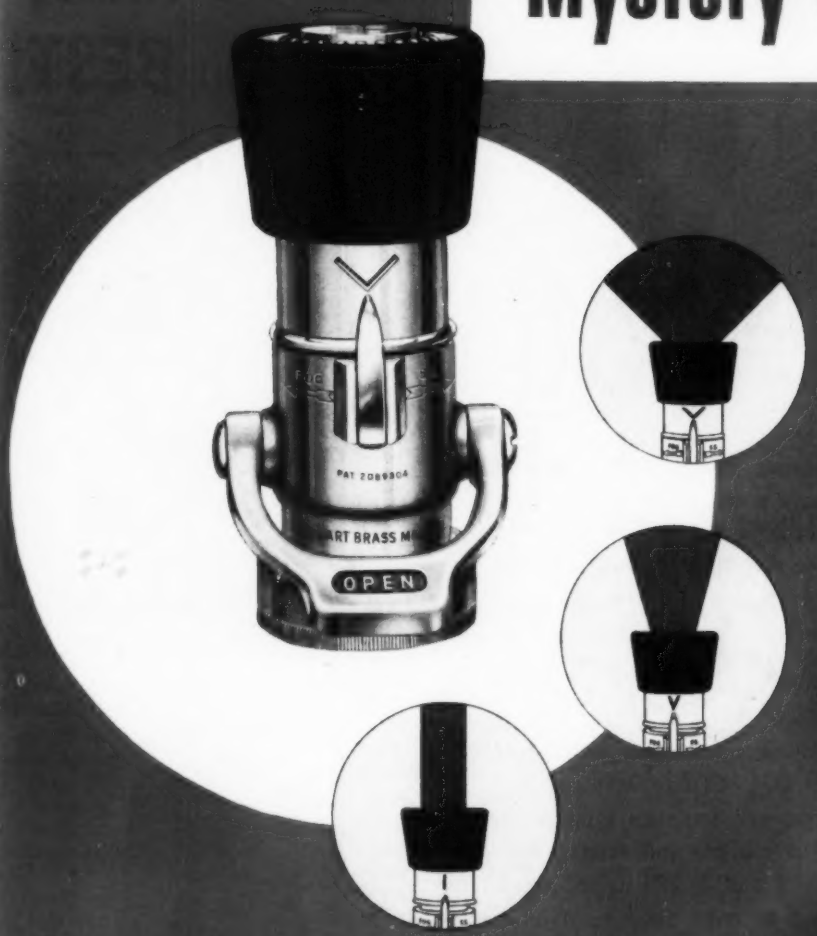
In plotting effective coverage, Chrysler Siren Layout Engineers take into consideration the varying intensities of normal urban noises which must be overcome. Learn what your community requires. Learn why a Chrysler Air Raid Siren is a *sound investment.* Write . . .
Dept. 1011, Siren Layout Service, Industrial Engine Division, Chrysler Corporation, Trenton, Michigan.



CHRYSLER
AIR RAID SIREN

Defense is a vital need, shared by all. Join and assist the Civil Defense group in your area.

Select-O-Stream Mystery Nozzle



WITH THESE EXCITING FEATURES

SET TO ANY STREAM WITHOUT LOOKING
Embossed stream indicators automatically "tell" your fingers—selects the stream

☆

SHUTS OFF IN ANY POSITION

☆

SET TO TURN ON IN ANY POSITION

☆

LOCKS TO THE STREAM YOU CHOOSE

☆

SEPARATE BALL TYPE SHUT OFF
(Brass to neoprene seat)

☆

IMPROVED GRIP—serves as both grip and bumper. Mechanically sealed—it won't come off

You get the stream you want—at a finger's touch. And you get it fast. No need to see it . . . the embossed (Braille-like) Stream indicators "tell" your fingers by touch. The SELECT-O-STREAM *MYSTERY NOZZLE* locks to the stream you choose. Shuts off in any position. Set to turn on in any position. Protective curtain of water at the wide "V" . . . 30° fog at the standard "V" . . . Straight Stream at the "I"—and any degree of stream in between. *Be sure to write for literature now!*

ELKHART BRASS MFG. CO., Inc.

1902—FIFTY YEARS OF FIRE FIGHTING PROGRESS—1952

ELKHART, INDIANA

You bet I specify MIDWESTERN Protective Clothing ...my men deserve the BEST!

PROTECTION • COMFORT • SERVICE

Superior quality, design, fabric texture and many exclusive features have made Midwestern Protective Clothing the leader wherever men fight fires. Mackinaw Coats and other famous Midwestern garments help safeguard the fireman's life on every run . . . enable him to efficiently use his equipment to the fullest advantage.

There is no substitute for the extra protection, built-in comfort and longer wear you get by specifying Midwestern clothing. In our vast selection of rubber materials you will find the type of fabric exactly suited to your climate and needs. You can count on the softness and flexibility of the high grade materials used to meet your most exacting requirements for lasting comfort and rugged service.

Due to government requirements for Midwestern Protective Clothing. prompt delivery will be assisted if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you literature and material samples for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Coats**

E&J...the World-Wide Lifesaver

THESE FOREIGN COUNTRIES AND U. S. TERRITORIES USE E&J RESUSCITATORS

ALASKA
ANGOLA
ARGENTINA
AUSTRALIA
BELGIAN CONGO
BELGIUM
BRAZIL
BULGARIA
CANADA
CHILE
CHINA
COLOMBIA
COSTA RICA
CUBA
CYPRUS
CZECHOSLOVAKIA
DOMINICAN REPUBLIC
ECUADOR
FRANCE
FRENCH MOROCCO
GERMANY
GREECE
GUATEMALA
HAITI
HAWAII
HONDURAS
ICELAND
INDIA
ITALY
JAPAN
MEXICO
MOZAMBIQUE
NETHERLANDS
NEW ZEALAND
NICARAGUA
NIGERIA
NORWAY
PANAMA CANAL
PERU
PHILIPPINES
POLAND
PORTUGAL
PUERTO RICO
RUMANIA
SALVADOR
SAUDI ARABIA
SOUTH AFRICA
SUEZ CANAL
SWEDEN
SWITZERLAND
THAILAND
TIMOR
TRIESTE
TUNESIA
URUGUAY
VENEZUELA

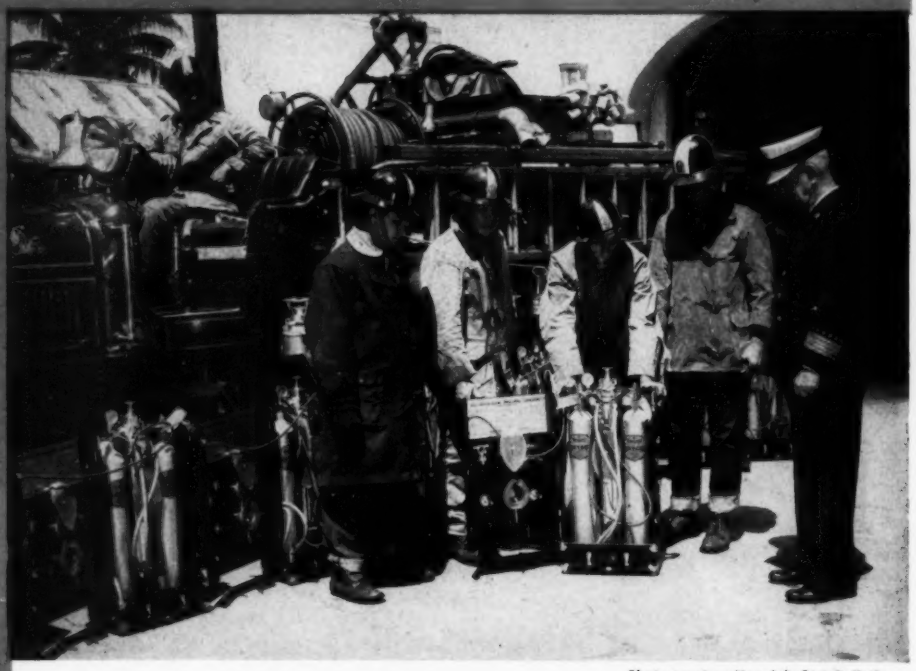
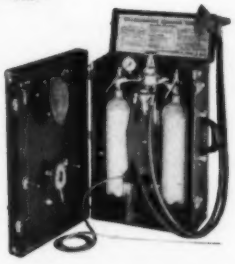


Photo courtesy Honolulu Star-Bulletin

NINE E&J RESUSCITATORS are standard Life Saving Equipment in HONOLULU

Life-saving services in these 57 foreign countries and U. S. Territories, in most cases located thousands of miles from the United States, are unavoidably "on their own" far more than similar services here. Consequently they select their equipment with great care. First, of course, they require equipment that will provide maximum effectiveness of treatment in complete safety for adult, child or infant. Second, it must be so completely automatic in operation and so simple to use that the chance of error in operation or judgment is practically eliminated. But especially important in their case, it must remain highly dependable year after year regardless of extremes in weather or conditions of use and it must remain free from frequent need for repairs. *In every one of these foreign countries and U. S. Territories life-saving services have selected E & J Resuscitators as standard equipment!*



E&J RESUSCITATOR • ASPIRATOR • INHALATOR

FROM MOZAMBIQUE TO U. S. A.

Your assurance of saving victims of asphyxiation is greater when you have an E & J Resuscitator available for immediate use. It breathes completely for the victim, using pure life-giving oxygen. It does it automatically, efficiently, safely, tirelessly and with built-in skill. Most hospitals throughout the world use it routinely; Rescue Squads say it is their greatest life-saving tool.

DON'T BE WITHOUT IT!

To see for yourself write to E&J today for a free demonstration

E & J MANUFACTURING CO., Dept 526-6, Burbank, California

Originator and world's principal producer of automatic resuscitators

IT'S TOPS

... the noticeably better performance of American Fire Hose is the natural result of skillful, painstaking manufacture. American does not compromise with quality—as a result critical buyers eventually standardize on American.

LAMINATED CONSTRUCTION 5 ... calendered sheets

CRACKERJACK

MUNICIPAL FIRE HOSE

OTHER AMERICAN BRANDS

WHITE	*TREATED
Crackerjack	Crackerjack-Arcolized
American	American-Arcolized
Municipal	Municipal-Arcolized
Tiger	Tiger-Arcolized
Underwriters	Underwriters-Arcolized

Fully guaranteed against mildew and rot; water repellent.

FLEXIBLE . . . balanced weave and premium yarn assure greatest strength and flexibility.

SMOOTH WATERWAY . . . lowest possible friction loss.

DEPENDABLE . . . unsurpassed for ruggedness and long life.

LOWEST COST PER FOOT PER YEAR

ASK FOR BULLETIN

Descriptive literature is available on American Fire Hose. Ask for your copy—no obligation.

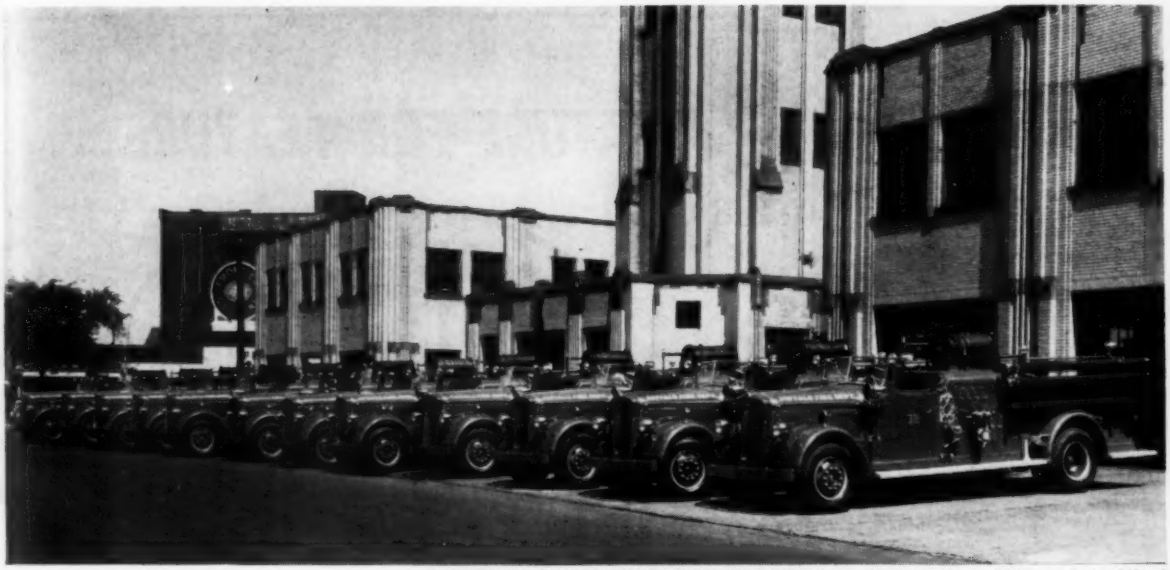
THE American RUBBER MANUFACTURING CO.

FACTORY & General Offices | 1145 Park Avenue, Oakland 8, California, Phone: OLympic 2-0800

Branch Offices: SEATTLE, Smith Tower, Phone SEneca 1727
PORTLAND, Dekum Building, Phone CApitol 1708
SAN FRANCISCO, 7 Front St., Phone SUtter 1-6868
LOS ANGELES, 711 E. Gage Ave., Phone ADams 1-9279

THE AMERICAN RUBBER MFG. CO. • OAKLAND CALIF. •

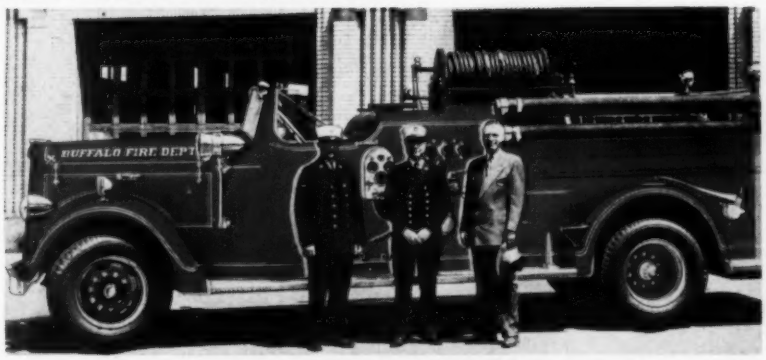
Write for name and address of your nearest American Distributor



● **BUFFALO'S MODERNIZATION PROGRAM** resulted in the addition of 22 Ward LaFrance Fire Apparatus. Shown here are twelve 1,000 gal. Pumpers delivered in 1952.

22 WARD LA FRANCE FIRE APPARATUS

Make Buffalo Fire Department One of World's Most Modern



● **MEET THE MEN** behind Buffalo's modernization program. From left to right, Deputy Chiefs Farrell and McGee and Commissioner of Fire Becker.

BUFFALO, N.Y., can rightfully boast of having one of the world's most modernly-equipped fire departments. None of its equipment is over 10 years old—a tribute to the modernization program instituted by Commissioner of Fire Harold R. Becker. And in the past 3 years, the city has acquired 17 Ward LaFrance Pumpers and 5 Ward LaFrance Aerial Ladder Tractors.

IS YOUR EQUIPMENT OBSOLETE? Let Ward LaFrance help modernize your community's fire fighting forces with new, ruggedly-built apparatus. You'll find Ward LaFrance Pumpers in 130, 150, 200 or 240 H.P. capable of operating under a wide range of conditions—and ready to deliver the weight-to-horsepower ratio necessary for fast get-aways and hill-climbing.

SEND FOR BULLETIN Get full details on Ward LaFrance Fire Apparatus—write for new, illustrated bulletin today!

WARD LaFRANCE
TRUCK CORPORATION
Fire Apparatus Manufacturers for over 30 Years

GENERAL OFFICE & FACTORY: Grand Central Avenue, Elmira, N.Y. *Tel. 5171*
DIRECT FACTORY BRANCH: 139th Street & Bruckner Blvd., New York 54, N.Y. *Tel. CYpress 2-3300*
EXPORT: Ward LaFrance International, Inc., Elmira, N.Y., U.S.A. *Cable Address:* "WARDTRUCK"

Western New York Representative: T. A. Miller, 120 Washington Highway, Snyder 21, N.Y.

FEATURE FOR FEATURE...

DRY CHEMICAL (C-O-TWO)

FIRE EXTINGUISHERS

are your best buy!

● These fast, positive fire killers are easy to operate, compact, well-balanced and offer extensive maneuverability indoors or outdoors... no extra gadgets protruding or complicated operating parts. The outstanding mechanical breakage feature of C-O-TWO Dry Chemical Type Fire Extinguishers, plus continuous inert gas pressured agitation or fluffing, together with a skillfully blended free flowing dry chemical guarantee lasting, foolproof fire protection. All sizes are rechargeable on-the-scene by anyone... no special tools required.

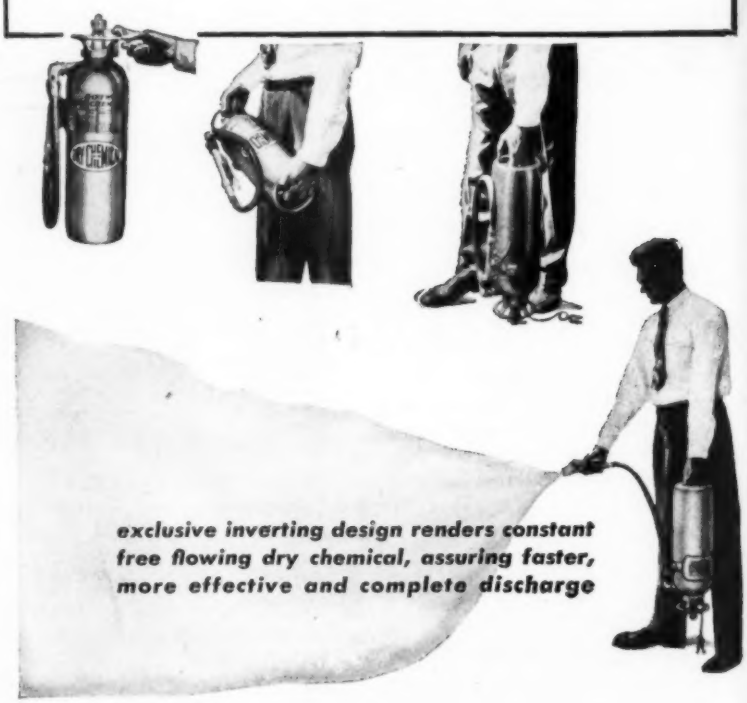
C-O-TWO Dry Chemical is a finely pulverized powder... non-conducting, non-corrosive, non-abrasive, non-freezing and non-toxic... special compound consists of sodium bicarbonate and other chemicals skillfully blended to render high fire extinguishing qualities, remain free flowing while being used and withstand long periods of storage without deterioration. When brought into contact with fire, C-O-TWO Dry Chemical absorbs a greater part of the heat, decomposes and releases fire killing gases. This heat absorption process acts as an insulating screen for the fire fighter.

Fully approved and built to rigid specifications... C-O-TWO Dry Chemical Type Fire Extinguishers are exceedingly effective on flammable liquid, gas and electrical fires, as well as surface fires involving ordinary combustible materials... rated by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories for class B and C fires.

Convenient 4, 20 and 30 pound hand sizes... no syphon tubes or valves within the cylinder to become clogged or inoperative... discharge hose and squeeze type discharge nozzle remain empty until actuation takes place... one piece removable top assembly.

Also, convenient 150 pound wheeled size... sturdy, wide-faced wheels... discharge hose and two position discharge nozzle having soft or solid stream fully enclosed in protection casing... footrail and dual bar handle provide easy inverting.

Act now for complete free information on these top quality fire extinguishers. Remember... you can't put fire off... fire doesn't wait. Get the facts today!



exclusive inverting design renders constant free flowing dry chemical, assuring faster, more effective and complete discharge

C-O-TWO FIRE EQUIPMENT COMPANY

NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

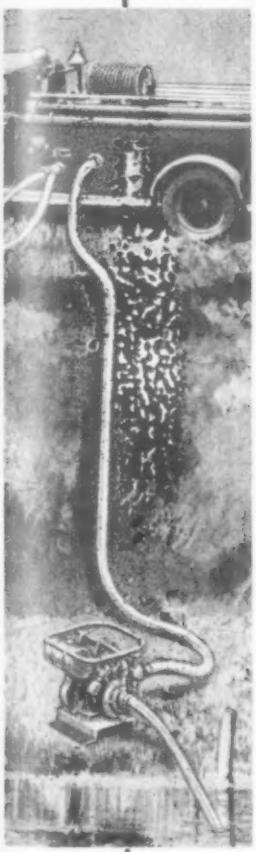
Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers • Built-In Smoke and Heat Fire Detecting Systems

Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems

pack extra fire-fighting punch with this lighter, more powerful American-Marsh 3XD Pump!



Useful? You bet it's useful! And more than ever, now, because recent design improvements have *increased* engine horsepower and *reduced* total weight. You get greater pressure—greater water volume delivered—and easier carrying, too!

As a booster carried on your apparatus, it can help you out of many tight spots! From pond, stream or cistern, the 3XD delivers enough water to pumper, under normal conditions, to supply two 1½" hose lines with ½" nozzles, or one 2½" line with ¾" nozzle. Left at the fire to pump out a basement, it frees your pumper to return to quarters.

Highly popular with rural departments, the 3XD is equally valuable in the city for civil defense, flood recovery, etc.

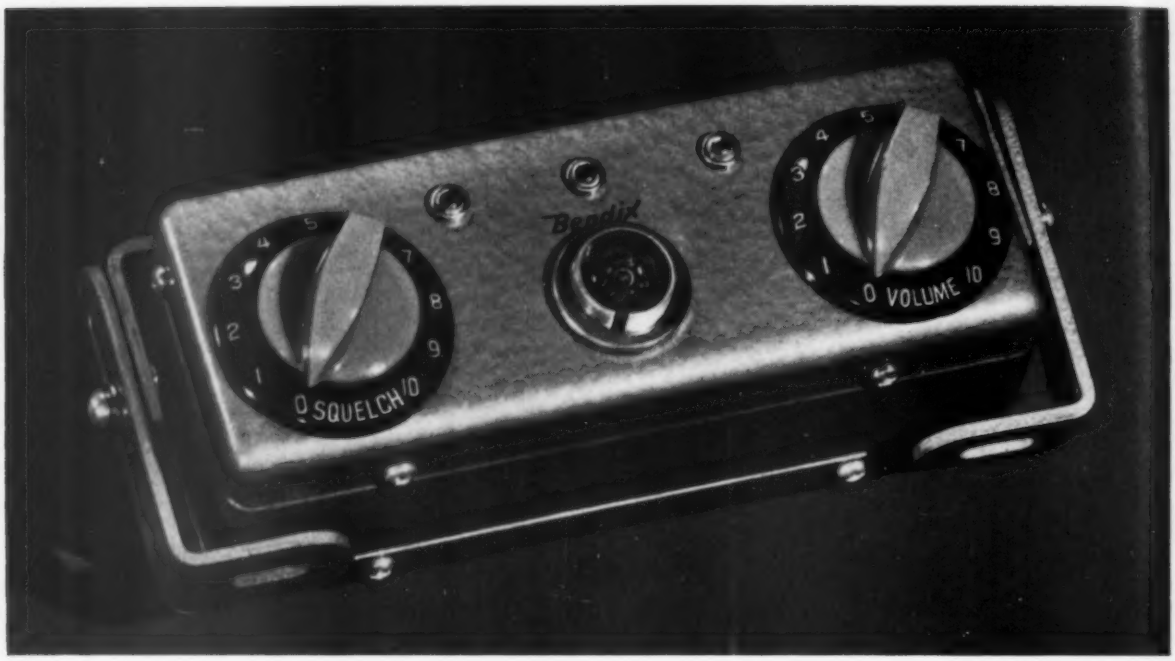
For complete details, write for Bulletin 8120

Use the 3XD as a booster for your pumper — or to pump out basements. Handles dirty water without serious damage.

AMERICAN-MARSH PUMPS

BATTLE CREEK MICHIGAN

CANADIAN APPARATUS PLANT: American-Marsh Pumps (Canada), Ltd., Stratford, Ontario, Canada



No Chopped-up Messages in Fringe Areas with New Bendix 2-Way Radio!

NEW ELECTRONIC SQUELCH IS THE SECRET!

How'd you like to talk to your driver . . . clear as home radio . . . when he's 20 or more miles away? No chopped up signals! No blurring! All signal . . . and no noise!

Today you can get all this in the revolutionary 2-way Bendix Trafficmaster. It gives you dozens of advantages over ordinary mobile radio . . . but doesn't pull any more amps than a headlight!

Electronic Squelch the Secret

Bendix engineers have perfected an electronic squelch with a delayed action that gives you *all* the signal . . . none of the noise. It works just as well in the densest downtown traffic too.

Your Bendix 2-way is new, it's rugged. Easier to service and maintain. (Bendix, for instance, uses Selenium stacks instead of rectifier tubes. They never wear out.) Your Bendix is completely accessible for service or adjustment. The transmitter, receiver and power supply are all on one chassis . . . separately slotted for easy 3-way removal . . . pivot, straight up, or straight out.

From hand sets to land stations

In addition to the latest type of mobile equipment . . . Bendix offers a complete line of fixed stations from 2½ to 250 watts. As well as accessories from hand sets to speakers, antenna to shock mounts . . . plus all technical help in obtaining license and complete system engineering.

Write today . . . because you too can now afford the best in 2-way radio. Bendix costs you no more than ordinary equipment. Get all the information.

BUY ON INSTALLMENT PLAN

Bendix has developed with local banks, what has been called one of the finest financial plans anywhere. You pay for your new Bendix 2-way radio . . . as you use it and as it makes money for you. Write for complete details to the address below.

Bendix MOBILE Radio

Division of Bendix Aviation Corporation
Baltimore 4, Maryland

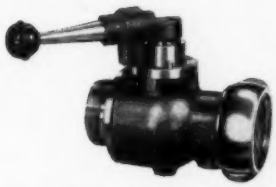
Bendix AVIATION CORPORATION

Export Sales: Bendix International Division
72 Fifth Avenue, New York City

Products for the Entire FIRE FIGHTING FIELD

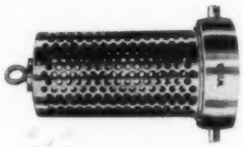
TRUMPET SIAMESE VALVES

Famous "Control-Flo" valve action, roller bearing swivel construction. Designed as short as possible (9") for apparatus body clearance. Available in 4", 4½", 5", or 6" diameter sizes.



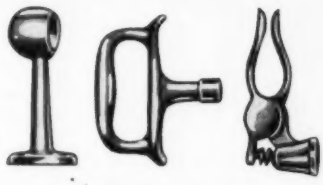
CONTROL-FLO APPARATUS VALVE

Operates easily at any pressure, in either direction. Controls hose pressures without changing pump speed. Throttle type handle locks "Control-Flo" valve in any position.



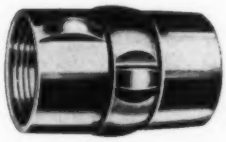
TRUMPET TUBE STRAINER

A suction strainer made of heavy cast brass throughout. The ample hole arrangements permits free suction to pump for maximum performance. Made to individual thread requirements in all sizes from 1½" through 6".



FIRE TRUCK FITTINGS

Wooster Brass can furnish highest quality truck fittings such as brackets, pole and bar holders, seat handles, hose clamp handles, axe holders, etc. Polished brass or chrome finishes available.



SKI-LUG FIRE HOSE COUPLINGS

Scientifically shaped to eliminate hooking when drawing hose lines over obstructions. Pin-lug couplings also available for fire hose, mill hose and linen hose. Full rounded lug contour reduces pulling friction.

TRUMPET SUCTION HOSE COUPLINGS

Available in 3 combination handle-lug types. The high quality workmanship and finish of Wooster Suction Hose Couplings will make you proud to put them on any equipment. Made with a free-action, roller bearing swiveling feature.

TRUMPET QUADWAY NOZZLES

The Quadway's fire fighting versatility has made it the standard nozzle of thousands of departments and industrial fire-fighting systems. Provides a finger tip choice of a solid straight stream, a dense fog-mist, or a combination of both to any varying degree. Full choice of sizes.

GEYSER TURRET NOZZLES

Available in 2, 3, or 4-inlet types. Can be turned in a complete circle horizontally. Full adjustable vertical range. Operates safely at lower elevation ranges.

GEYSER DELUGE DECK PIPES

Mount on apparatus or wherever permanent fire protection is needed, such as lumber yards and oil fields. Has full 360° horizontal sweep and a vertical range of 10° below and 80° above horizontal.

The precision products shown here are just a few of the many items of cast brass fire equipment manufactured by Wooster Brass. Write for your catalog now . . . and consult your Wooster Brass representative for all your equipment requirements.

WOOSTER BRASS

WOOSTER, OHIO

A DIVISION OF THE FYR-FYTER COMPANY

HIGH PRESSURE

In every test the Seagrave Auxiliary High Pressure (Fog Producing) Centrifugal has an outstanding record. Proof again and again that Seagrave engineers have found the answer for a pump to deliver the maximum performance while the truck is in motion. The Seagrave High Pressure Centrifugal is a four-stage pump driven by standard SAE transmission power take-off. It is precision machined from all fine grained bronze for a working pressure in excess of 1000 pounds. The pump contains four fine grained bronze impellers and has a stainless steel shaft. It is available on both Seagrave Standard and Commercial Pumpers.

Capacity of Seagrave Auxiliary High Pressure Centrifugal from the water tank is as follows:

40	**GPM at**	**1000 PSI**
60	**GPM at**	**800 PSI**
70	**GPM at**	**600 PSI**
80	**GPM at**	**400 PSI**
100	**GPM at**	**200 PSI**

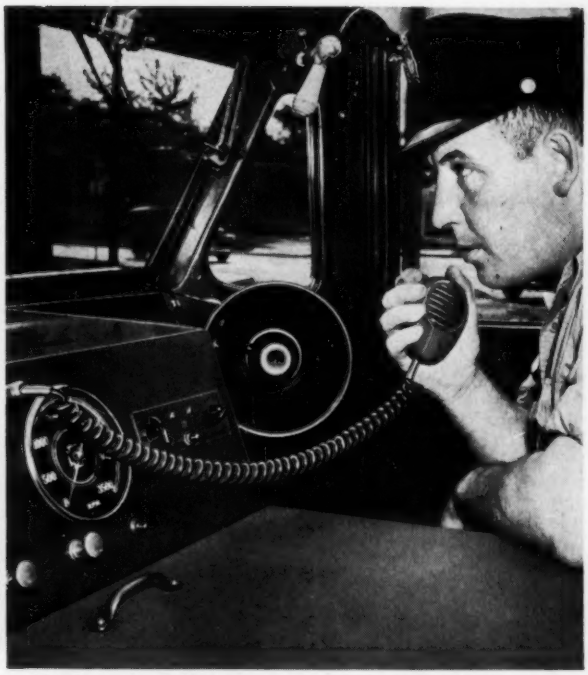
THE SEAGRAVE CORPORATION
Columbus, Ohio
Bickle-Seagrave, Ltd., Woodstock, Ont.

FOR EXTRA VALUE IN
PERFORMANCE
DURABILITY
DEPENDABILITY

Seagrave

THE GREATEST NAME
IN FIRE APPARATUS

Fire headquarters at Arlington. Dispatcher Arthur Varnau controls 14 trucks by radio in the Fire Department network.



Private Arthur Willett talks from a supervisory car to headquarters 12 miles away. Mobile unit shown is G-E model MC-1N.

Complete county fire control system in Virginia—

G-E RADIO EQUIPMENT DOUBLES EFFICIENCY

THE Arlington County Fire Department solved their area control problem with General Electric 2-way radio. This G-E communications system includes 12 mobile 30-watt and two 60-watt units.

By uniting on one frequency all fire control stations in a 24-square mile county area, Arlington officials estimate the system doubles the efficiency of fire-fighting apparatus. Speed in spotting and getting to fires has been increased, and fire damage reduced considerably.

The CAS* man at the G-E office near you makes a specialty of radio communication for counties and municipalities. A call to him can be of long-term advantage to your community.

**Communications Advisory Service*

Stimulate civil defense interest in your city by showing G.E.'s prize-winning March of Time film "And A Voice Shall Be Heard!" No charge for prints. Write us. *General Electric Company, Section 10102, Electronics Park, Syracuse, New York.*

GENERAL ELECTRIC

Arlington Fire Chief A. C. Scheffel installed General Electric units in his trucks 3 years ago, is impressed by low maintenance cost and year 'round dependability of the units.

MAIL NOW FOR FREE INFORMATION!

General Electric Company, Section 59112
Electronics Park, Syracuse, New York

Yes, send me complete information on General Electric 2-way radio equipment for fire department installation.

NAME.....

ADDRESS.....

CITY..... STATE.....

INTANGIBLE LOSSES

can take a greater toll!

When a business suffers a serious fire, insurance usually compensates for the *tangible* losses. It's the *intangible* losses that really hurt—and fire records show that in many cases they take an even greater toll!

Intangible assets either cannot be or seldom are insured, yet they can go up in smoke just as easily as your tangible assets. Your surest protection against such losses is to safeguard your tangible assets against destruction by fire.

Thousands of concerns throughout the United States have taken this precautionary action through use of ADT Central Station Fire Protection Services to detect and report fires *automatically* before they can reach dangerous proportions.

May we explain how these services can be applied to protect your property and profits?

ADT

Controlled Companies of

AMERICAN DISTRICT TELEGRAPH COMPANY

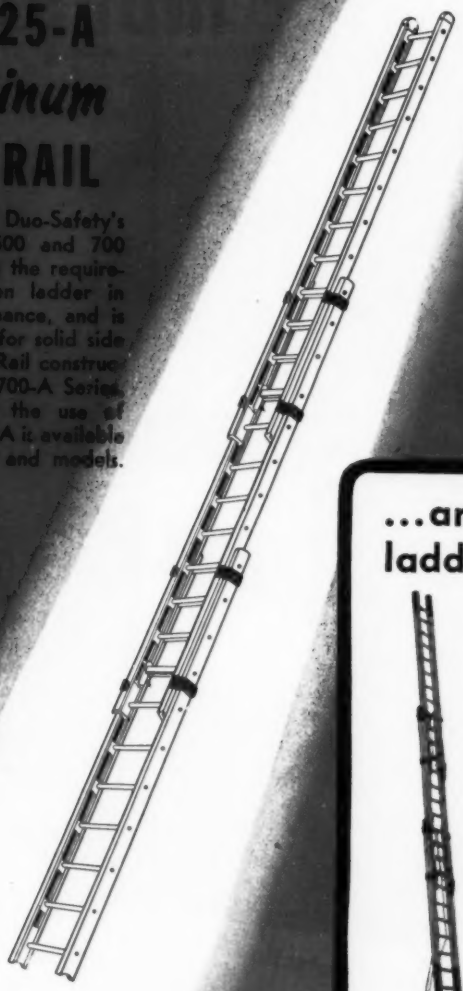
Executive Offices: 155 Sixth Avenue, New York 13, N. Y.

A Nationwide Organization

DUO Safety FIRE LADDERS

SERIES 825-A *All Aluminum* CHANNEL RAIL

A companion ladder to Duo-Safety's famous All-Aluminum 500 and 700 Series, this model fulfills the requirement for an in-between ladder in both price and performance, and is a superior replacement for solid side wood ladders. Channel Rail construction is identical to the 700-A Series with the exception of the use of heavier rails. Series 825-A it available in a full range of sizes and models.



...and a companion ladder in wood

SERIES 200

Popular solid side ladders now being used by hundreds of fire departments. Select Douglas Fir rails and rungs of second growth hickory. Equipped with highest quality fittings. Available in 200 (2-section), 225 (3-section), 250 (Wall Ladder), 275 (Roof Ladder). In all standard sizes and can be built to specifications.

DUO-SAFETY LADDER CORP.

809-11 NINTH ST., OSHKOSH, WISCONSIN

Safeguard OUR NATION'S INDUSTRY

Dependable fire protection for defense and civilian industries is vital, and the fire signaling system is the first line of defense against fire. Insist on GAMEWELL Fire Signaling Equipment — it has proven reliable, efficient, and durable.

TRADE MARK GAMEWELL TIME THE PAYOFF

The GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
IN CANADA: NORTHERN ELECTRIC COMPANY, LTD., BELLEVILLE, ONTARIO

NOVEMBER, 1952 FIRE ENGINEERING VOL. 105, NO. 11

With the Editor

Responsibility for Aiding Neighbors In its July, 1952, issue, *Fire Engineering* discussed the question of out-of-area response by a fire department, with particular reference to the tragic death of seven persons in a tar paper shack just outside the city limits of North Bay, Ontario. In an editorial headed "Borderline Bugaboos" the point was made that the decision of when and where and how to respond to calls for out-of-town help should be left to the chief of the local fire department so called upon, and that he, and not some public or other official, should have authority to make the decisions concerning the fire department operation.

Reaction to this editorial, and statements from Fire Chief H. G. Thomas, of North Bay, and Ontario Fire Marshal William Scott, indicate that Canada is not alone in difficulties over borderline and out-of-town response by its fire forces. There is apparently just as much confusion on the subject existing in the States.

In an effort to crystallize the problem and develop possible solutions, the readers of *Fire Engineering* were asked in a recent Round Table to answer some seven questions dealing with out-of-area fire protection by organized fire departments.

The replies, from every part of the nation, are most enlightening; the first installment of answers will be found in the Round Table section of this issue.

It is obvious that confusion exists over the extent and kind of outside protection which a fire department may be asked to furnish, and which it may undertake. Some fire chiefs confuse contractural agreements to provide protection with what is commonly called mutual aid. There is no mutual aid involved where a fire department agrees to provide protection on a paid or voluntary basis to a neighboring area if that area has no organized fire protection of its own. In short, mutual aid can't be "mutual" when it is one-way.

Next comes the limitations of providing outside coverage. To begin with, the average fire department today has about all it can do to safeguard its own community without taking on additional outside territories which must be protected. Further, its primary financial and other support comes from the community which it is organized to protect. The fact that there may be a source of revenue from outside interests which are protected is beguiling, but still not as important as bringing local protection nearer perfection.

The answer to the problem seems to be that if the necessary additional men and equipment are provided the fire department of the community which is called upon to protect outside interests, local fire protection need not be jeopardized when such outside coverage is furnished. There appears to be no valid reason why a town, city or district fire department should not take on the added contractural or other out-of-town work, if such additional work does not threaten local protection. Actually, under these conditions, the fire department itself if given reserve, or extra, apparatus and manpower for this increased outside service, is bettering itself by adding equipment for possible use in the event of any serious emergency within its own confines.

Even under the most favorable conditions, however, responsibility for the dispatch of all protective fire equipment must rest with the chief of the department, not with some persons on the outside. There is no sense in saying to a fire chief: You are in charge of all fire control operations within your political subdivision, but you have no legal or other responsibilities when it comes to out-of-town calls, whether on a contractural, or "for free" basis, or in a mutual aid program. Yet this is precisely what some municipalities do say. In some states, chiefs of township or village fire departments must secure permission of their local supervisor, mayor, or fire commissioner, before venturing to respond to a call for help.

It can readily be seen that some approval of higher-ups may be desirable or necessary, when it comes to leaving town for parades and non-fire fighting purposes, or when removal of the fire forces entails an obligation which must have local civic approval. However, whatever the emergency or task to be undertaken by the fire department, there should be no delay in reaching decisions on the course to be taken. This can be done only by vesting the necessary authority for action in the ranking officer of the fire department currently in charge at the time.

Fred Shemwell

Concealed Spaces Present Major Problem in Fire Attack

Unseen, Hard-to-get-at, Fires May Tax Skills and Facilities of the Best Fire Force

By ROI B. WOOLLEY

Editor's note: Behind the terse accounts of many serious fires that got away from fire fighters, runs current the incidence of hidden, or concealed spaces in which, and through which fire bred and traveled, out of reach of firemen and fire streams.

These fires offer serious problems in fire detection, attack and control, problems that may face every fire department, large and small. For the handicap of the "unseen fire" can be found in every type of building and in almost every occupancy.

Thus far, there appear to have been few attempts to study this universal problem in the light of fire attack methods and strategy. Yet the subject is one which should have paramount consideration in the fire service.

The study which follows does not attempt to review and encompass the entire subject but only the more important phases of it. The author hopes merely to direct more thinking and more study on the part of fire control strategists to the matter.

In this connection, readers are urged to review collateral texts which bear upon other related phases of fire attack, in the series of studies by the same author, entitled: "Coordinated Attack Urged to Improve Fire Control Strategy" (Fire Engineering, April, 1949); "Adequate Lighting Speeds Up and Safeguards Fire Attack" (July, 1948); "Carrying the Attack—and the Water—to the Fire" (Sept. 1949); "Modern respiratory Equipment Essential in Fire Attack." (Feb., 1950).

THE hazard of the concealed breeding ground of fire is not limited to any one type of occupancy. It is found in new as well as old buildings, and very widely in rebuilt structures. The "concealed space" which plagues the fire fighter may be the result of structural failure or, as is more often the case, it may be the direct result of carelessness in design and construction.

Concealed spaces which further fire are found not only in buildings, but in the contents of buildings. Fire can hide and spread through storages in conveyances—ships, freight cars and trucks. It can lurk beneath piers, platforms, sidewalks and behind signs. On Sept. 11, last, fire originated in a concealed space formed by the flooring of a grandstand and the combustible ceiling of a storage room in Louisville. Caused no doubt by a cigarette that dropped through a crack in the grandstand floor, the resulting fire drove more than 5,000 persons out of the stand and caused property loss of $213,300.

Two pet hiding places of fire are attics and basements. In between, there are numerous other concealed spaces—channels and pockets for fire to originate or spread. Among these may be mentioned air conditioning, ventilating and exhaust systems; piping and fittings for plumbing, heating and lighting, insulation and acoustical installations; coverings for pipe and structural supports. Then of course, there are the spaces created by partitions, falsework, false fronts, tunnels, runways, and breezeways, not to mention the pockets and spaces created by temporary construction, reconstruction and decoration.

A review of serious fires in which concealed spaces" was given as a contributing factor discloses that they are most frequently encountered in the occupancy-group of mercantile, habitational (multiple dwelling, apartment and hotel), storage and warehouse. Experienced fire officers are particularly suspicious of fires in structures that have had their "faces lifted."

Typical cockloft overhaul operation during fire in a six-story New York apartment. Axe, hook and claw tool are used to open concealed spaces. Note firemen wear gloves and do not bunch over weakened burned roof area.

Why Are These Fire Especially Hazardous and Troublesome?

Because they complicate the business of fire attack and control and permit little fires to grow big, they are a hazard to life and property.

Fire at best is unpredictable, treacherous, uncertain. It rarely follows a set pattern. The hidden space is one of its most deadly and destructive allies—a hazard not only to owners and occupants of property, but to the fire fighter.

Concealed spaces provide passageways and channels between buildings and/or areas, to further the extension of fire and attendant smoke and gases and to place it out of easy, immediate control by the fire forces. Sometimes fire will bore and burrow its own concealed space, where it may lurk for hours, even days, before discovery.

Concealed spaces make for stubborn, persistent, hard-to-find-and-fight fires, which punish firemen because of the difficulty in locating the heart of the fire and determining its course of travel and its speed of spread. It is almost impossible to anticipate the direction of travel or the severity of fire which develops in hidden areas.

This complicates the task of attack and extinguishment. It makes it difficult to determine the amount and extent of fire control forces needed to subdue such fires. The chronology of fire department response to multiple alarm fires often attests this fact: when additional alarms are sounded some time apart it is frequently because it was impossible to immediately size up the nature and extent of the fire, or where it was heading, or what it was feeding upon.

The concealed or hidden fire may develop deadly conditions by melting off gas connections or power lines thus

adding to the fireman's risks. But its most dread characteristic is as the developer of backdrafts or explosions. The opening of a door, skylight or other vent—even remote from the fire, may furnish the necessary oxygen to the smouldering, sluggish fire that has been lurking in some concealed space, to give it sudden, explosive life, with tragic consequences. The more hidden areas there are for fire to propagate and build up heat and gases, the greater the possibilities of this trouble for the fire fighter.

Another troublesome characteristic of the concealed space fire is the difficulty it creates in overhauling and preventing re-kindles.

Fire streams may finally reach to hidden spaces and knock down the fire lurking therein, but unless those areas can be overhauled and investigated and those fires completely killed, the dormant fire may later rekindle with disastrous results.

Different stores, but the same old connecting cocklofts spread taxpayer fire. Five alarms were sounded before stubborn, sneaky, early morning fire in this Bronx, N. Y., block was subdued. Fourteen stores wrecked; six firemen injured; loss about $250,000. Fire traveled through unstopped hidden channels.

In March, 1923, Providence, R. I., firemen were called to a fire in a six story building. They fought the blaze, in a ventilator duct in the kitchen, and on the third floor. It was considered extinguished about an hour later, but soon after a serious fire was discovered on the sixth floor, 70 feet from the flue where trouble had previously been encountered. Second, third and fourth alarms were sounded in rapid order, but despite the augmented forces the loss was heavy. Sprinklers which had been shut down by the department when the fire was thought extinguished and which were still out of service when the fire extended, contributed to the spread of the fire and heavy loss.

Fire communicated through hidden spaces to involve roof understructure in this hospital dormitory. Two dead, eight injured, but fire was kept from main hospital.

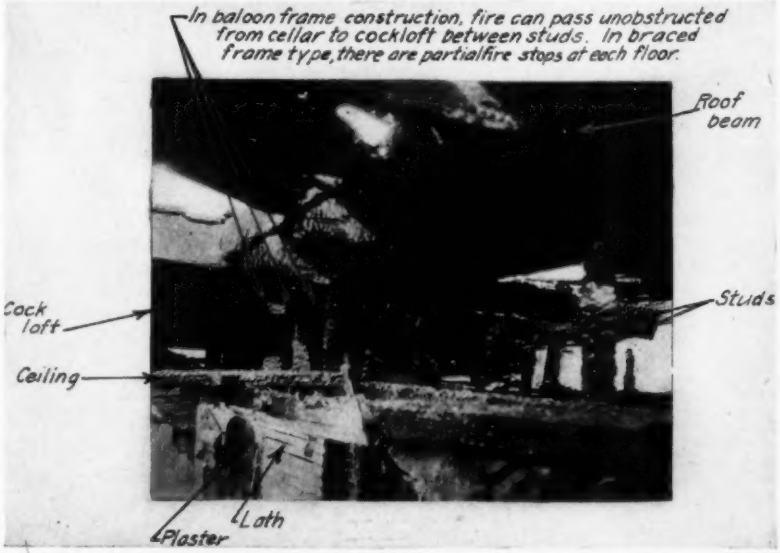
New York City had a serious apartment house fire, and Birmingham, Ala., suffered one of its heaviest losses in the burning of its then largest department store all because fire, which was once considered safely controlled, continued to spread via hidden channels.

It is not uncommon for fire to extend through structures protected by automatic fire detection and alarm systems, without causing the system to function. This happened in 1950 in Boston, Mass., where a fire in an old building occupied for paper storage and paper working, reportedly started in a concealed space near a fireplace. According to the N.F.P.A., which quotes the Boston Fire Department, the temperature in the building increased too slowly to operate the automatic fire alarm until fire broke out of the concealed space and flashed through the building. The loss on this fire was $1 million. The building's concealed areas had no fire stopping and no sprinklers. Fire fighters were fortunately able to save exposures.

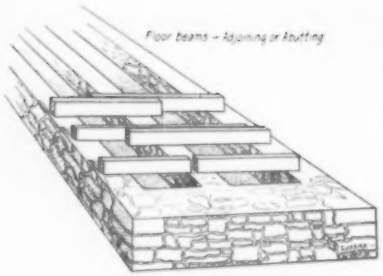
If any part of a building should be protected by fire detection and/or automatic fire extinguishing systems, it is these concealed and hidden areas. Yet for one reason or another, these vulnerable areas are often left unprotected, to become an invitation to fire.

New York City firemen will not soon forget the Lanes Department store fire of last March, where a delayed alarm, plus the peculiar construction, or arrangement of two five-story buildings and a "jumble of false ceilings" in the two buildings (including one of the "suspended-from-the-ceiling" types of fire breeders) gave the fire a head start on Manhattan firemen. These concealed areas provided a horizontal flue for fire travel, which continued notwithstanding the efforts of a five alarm assignment resulting in heavy loss.

Commenting on this blaze, the Department's publication WNYF said "The delayed alarm and the maze of hanging ceilings had given the fire a head start, however, and as fast as the truckmen opened up the many concealed spaces, the fire, faster still, had raced on beyond."


In baloon frame construction, fire can pass unobstructed from cellar to cockloft between studs. In braced frame type, there are partial fire stops at each floor.
Roof beam
Studs
Cock loft
Ceiling
Plaster
Lath

Illustrating how fire can travel through concealed spaces peculiar to balloon-type construction. This is why it pays to double check cocklofts and attics in all serious basement fires in such buildings.



Many hidden fires have resulted from ignition of floor beams by heat convection or contact. Fire can communicate to underside, or hidden areas of building via either adjoining of abutting floor beams, as shown in above diagram.

The irony of this fire was that a new, 4-story section of the department store had been sprinkled, but the hazardous old warehouse section had not.

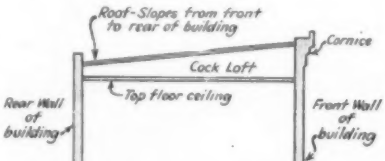
It appears axiomatic that these out-of-the-way spaces, if accessible, are invariably used for storage of combustibles. Not infrequently, firemen find the cause of their headache—speaking literally and figuratively—in subduing a particularly punishing fire, to be paints or other volatiles which have been stored in some out-of-the-way spot. It seems to be the practice today for merchants, manufacturers and warehouseman to load up every inch of space they can find in their places of business with stock, most of it parked and packed, unfortunately, with little or no thought as to its combustibility or how, if it should become ignited, fire fighters could ever manage to reach it and extinguish it.

The fires we are describing have another unfortunate after-affect. They contribute more heavily to water loss than almost any other kind of blaze. The reasons should be obvious. Even with the best of respiratory protection, with portable lighting equipment and other modern fire control facilities essential to fast, coordinated attack, stealthy fire can propagate and flourish out of sight, giving off smoke and fumes sometimes out of all proportion to the magnitude of the blaze itself. Firemen under these conditions can hardly be blamed for directing streams toward where they believe the fire to be located, even if they can't see it.

The condition is aggravated by the tendency to partition off basement and attic storage places, and other floor areas, and to permit some sort of openings between the spaces or cubicles. Every municipal fire officer has experienced fires where, despite fire streams that apparently were hitting the blaze they continued to spread. The simple truth is that the extinguishing agent was not reaching the fire. Where the blazes are the upper parts of structures, under these conditions heavy water losses are bound to result.

Fire Fighting Operations Where Concealed Spaces Are Involved

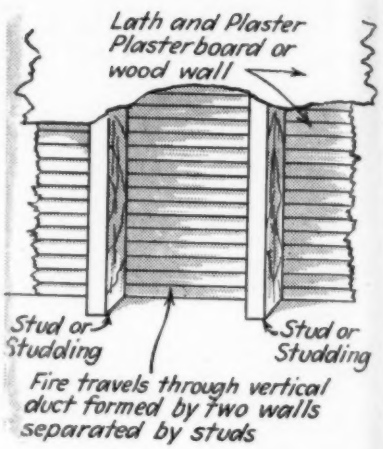
Fire department inspections should uncover at least the more evident hazards such as we have described. Notwithstanding the fact, however, that the hidden hazards are known, and the department has taken measures to shape fire attack strategy accordingly, it frequently happens that operations fail to proceed according to plan.



Sectional elevation of typical taxpayer, showing vulnerable "hidden" cockloft and cornice through which fire can travel if building is not fire stopped.

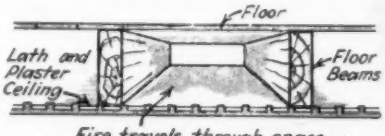
This happened in the case of the Lane Department store. From deputy chiefs down, firemen of the immediate area were said to be aware of the hazard existing in the layout, and plans of attack in case of fire had at one time been developed. But plans cannot anticipate every contingency, such as delayed alarms. No plans can anticipate all possible unfavorable developments. But that is no reason for not at least making the inspections, and preparing the attack plans.

Where there may be, or are suspected hidden areas involved or that may be involved, or where size-up fails to locate a logical source of the smoke and gases that are present, the spread of fire through concealed spaces may be anticipated, and while no effort should be spared to ferret out the source of the fire, immediate steps to prevent its extension, or its possible extension, should be taken.


Lath and Plaster
Plasterboard or
wood wall
Stud or Studding
Stud or Studding
Fire travels through vertical duct formed by two walls separated by studs

Size-up of the occupancy, exposures, direction and velocity of wind, condition of the weather weighed against the forces immediately and later available, and the degree of involvement, should determine these steps. The first one would be, if conditions seem to justify, to summon additional help. It may be that rescue units or additional forcible entry or other special equipment is wanted. But in this situation it is well to remember the old fire fighter's dictum: "You can always give good excuse for calling for help that was not needed, but you can never excuse *not* calling for help when it *is* needed."

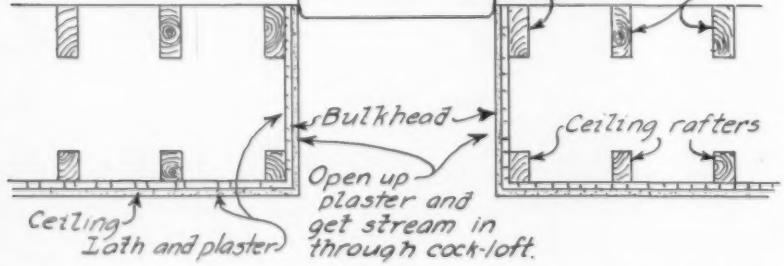
Put in other words, the need for additional help may not be immediately plain but if there is the slightest doubt, of its want, it's better to play it safe and not delay the calling.


Floor
Lath and Plaster Ceiling
Floor Beams
Fire travels through space formed by floor on top, ceiling on bottom and floor beams on either side.

Thus, fast, thorough size-up is indicated.

Obviously, fast attack, i.e.: the effort to quickly get at the seat of the fire, while laying plans to control extension through known, or believed-to-exist hidden spaces, is indicated. If, as said, fire isn't showing, an immediate investigation of all hidden areas which might be involved is called for.

Indications that fire has involved hidden spaces are: (a) hot walls; (b) blistering of paint or wall paper; (3) discoloration of walls, wainscoting or covering; (4) smoke emitting from partitions some distance from fire (where smoke can go, fire can go!); (5) unaccountable heat in an area; (6) crackling or other sound of fire behind a wall, ceiling or partition; (7) sudden cut-out of light circuits for no apparent reason; (8) persistent flare-ups of fire from some outlet, electrical ventilating, heating, air conditioning, regardless of water being directed at or into outlets; (9)



Roof structure may have vulnerable concealed areas. Hidden fire may travel throughout entire roof area before detection. Note bulkhead construction. Quick venting through bulkhead scuttle or trapdoor will slow fire spread through these concealed spaces.

Fog and applicator used to kill fire in hard to reach ceiling space. Sometimes the only way to reach fire in concealed hidden areas is to pull ceilings. Judicious use of low velocity fog applicator here simplifies this operation, reduces cutting and use of solid streams.

When streams apparently have no effect on fire (such as when operated through windows or other openings.)

Don't belittle insignificant little fires, such as those in closets, nooks, and hide-a-ways. Study shows that a number of serious blazes have developed, because of failure to perceive the potential hazards in what initially appeared to be trivial fires. By the same token, many small fires have developed into large ones because the first attacking fire forces either would not or could not carry their search for the fire to a conclusion. In other words, because of smoke, or fumes, or for some other reason, the first precious minutes of attack were wasted and the fire found its way into concealed places to develop into multiple alarm proportions.

In sizing up a fire building the experienced fire officer consciously or unconsciously observes certain fundamentals which may have a bearing upon possible concealed fire. The location and the architecture, together with the firm's name on the structure, afford an inkling of occupancy and contents. Concealed spaces may be suspected in buildings that have obviously been "modernized" i.e.: had their "faces lifted." The type of construction too, will often indicate possible routes of fire through hidden spaces; witness the rows of connected taxpayers, the two-family-dwelling housing, and the like. In industry, and in some mercantile occupancies, dividing and party walls may indicate broken up areas, as well as fire stops. The exterior may show another possible avenue of concealed fire travel, the cornice. Earlier files of this Journal contain references to many large fires which got away from the fire forces because the fires traveled through unstopped connecting cornices or other ornamental work. Cornices can be perfect hidden flues for fires.

Dividing walls and partitions may not extend through the top and roof of a structure, thereby offering fire opportunity to jump from one concealed space to another. Another avenue of fire spread, via hidden spaces, is found in the overlapping beams of building foundations. If smoke or flame indicate that fire has worked its way into these foundation areas, the procedure is like that wherein connecting cocklofts are suspected: to get well ahead of the fire and prevent extension.

Even if there is no evidence of fire in or near known concealed spaces adjacent to the fire, it is well to check on all those that are known, particularly hanging ceiling and platforms for example.

It should hardly be necessary to remind a fire officer to investigate the space between studding, and behind plaster-and-lath or other coverings which can prove possible avenues for fire extension. It is well also to emphasize the wisdom of getting above any serious fire in an un-stopped combustible structure. In short, before picking up, be doubly sure that the basement or ground floor fire hasn't in some unaccountable way played leap frog to involve the attic or other upper areas. Any false work, built-out walls or extensions, anywhere near the fire area, should be investigated.

Another reason for this thorough post-fire survey is that it may just possibly disclose evidences of arson, where fires were set in more than a single location in a building. It is true, this takes time and may not be in line with the rule to speed the return of company units as quickly as possible. Nevertheless, it is a good practice and, now that radio is rapidly coming into widespread use, the company can go back into service on the fire ground while the post fire check-up is being made.

We have mentioned fire which finds its way into concealed spaces. There is the fire which originates in these areas, and breaks out into other areas to possibly catch the attack forces in the rear, perhaps even cut off escape of fire fighters. This has happened. For this reason it is well for an officer to anticipate, where possible, the direction of fire travel and possible involvement of hidden spaces. It is well to give thought to the relation of these hidden areas to vertical and lateral arteries, shafts, passageways, stairways, etc. and consider the possibility of an enclosed or hidden fire breaking out, to communicate within these arteries.

Not all fires in concealed spaces travel upward; fire can and often will travel downward as well as up, and laterally in and through hidden spaces. In this connection it is well to remember that every fire has six sides: front, back, two sides and top and bottom.

In fighting fires where there is a possibility of extension through concealed spaces (and this applies to almost every type of occupancy) if it is indicated the fire has been burning for any appreciable length of time, be suspicious of possible hidden extension, and be wary of backdraft. Even if the main body of the fire has been controlled, institute inspection to determine if fire has worked into and through partitions and walls, or any

(*Continued on page* 972)

A suicidal gas blast caused this destruction. Fire fighter is opening up damaged wall area to ferret out possible fire.

Practical Fire Service Rescue

Part 1 of a Series

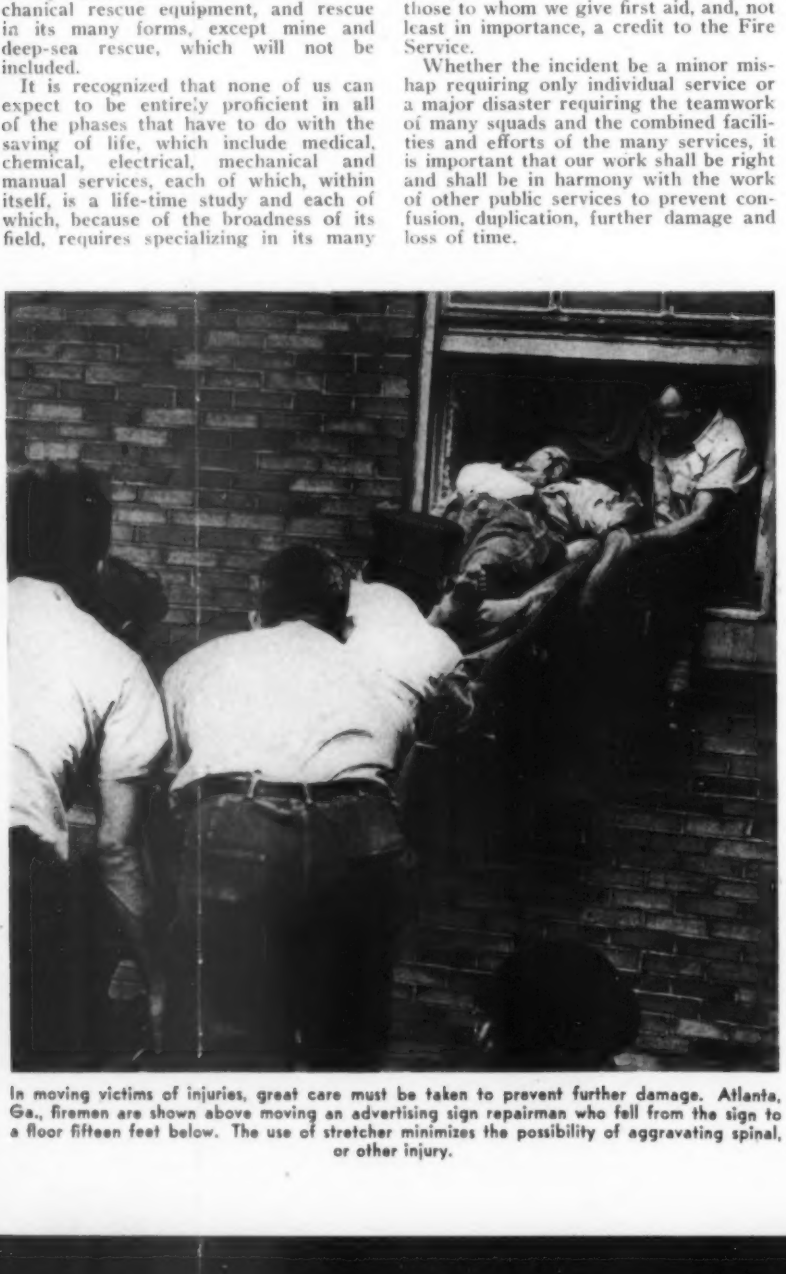
By JOE MAHAFFEY*

THIS treatise is designed to increase the ability and knowledge of personnel of the Fire Service delegated or detailed to that branch of the Fire Service known as Rescue; particularly is it designed for new men who might be charged with the responsibility of rescue without benefit of previous experience. It is intended that the word Rescue in this instance shall include all phases of Fire Service activities that pertain to the saving of human life—first aid, manual and mechanical artificial respiration, transportation, the use and care of mechanical rescue equipment, and rescue in its many forms, except mine and deep-sea rescue, which will not be included.

It is recognized that none of us can expect to be entirely proficient in all of the phases that have to do with the saving of life, which include medical, chemical, electrical, mechanical and manual services, each of which, within itself, is a life-time study and each of which, because of the broadness of its field, requires specializing in its many branches. It is hoped, however, that study of this treatise will show the necessity of squad members specializing in rescue work and will open the way for them to specialize.

Although it would be impossible to teach Rescue in its entirety in books, it is hoped that a fundamental knowledge can be gained that will lead to unity of thought and coordination of action in the Fire Service so that this important public service will be a boon to humanity, an aid to the medical men who are finally charged with the well-being of those to whom we give first aid, and, not least in importance, a credit to the Fire Service.

Whether the incident be a minor mishap requiring only individual service or a major disaster requiring the teamwork of many squads and the combined facilities and efforts of the many services, it is important that our work shall be right and shall be in harmony with the work of other public services to prevent confusion, duplication, further damage and loss of time.



In moving victims of injuries, great care must be taken to prevent further damage. Atlanta, Ga., firemen are shown above moving an advertising sign repairman who fell from the sign to a floor fifteen feet below. The use of stretcher minimizes the possibility of aggravating spinal, or other injury.

It is recognized that Rescue is not an activity confined to any one public service. Instead, it is a combined action involving many services, such as law enforcement agencies, ambulance services, life guard services, the medical profession (including hospitalization), public utilities, public and private mobile apparatus, industrial professions, and, in most cases, the services of untrained and unprofessional civilians who are first on the scene. It is hoped that we will not only learn what to do but also what not to do and what to prevent being done; and to gain an understanding and appreciation of the important part played by others.

Choosing Rescue Personnel

Rescue personnel should be chosen from among firemen who have had at least five years of fire fighting experience. There is a definite reason for this. Aside from the inhalator runs which are probably the most common of all rescue runs and seldom fire-connected, the largest percentage of rescue work will be fire-connected. When lives depend on a knowledge of the hazards related to any particular fire, only experience can decide between calm, deliberate, sensible thinking and action and rescued victims, as against foolhardy heroism and dead victims, and possibly dead personnel.

Rescue personnel, in addition to fire fighting experience, should possess the following qualifications:

1. They should be qualified in first aid as given by nationally accepted first aid authorities.
2. They should not only possess considerable first aid experience but should be interested in knowing how much assistance they are giving the medical profession.
3. They should be willing to study and increase their knowledge and keep abreast of modern trends and developments in this work.
4. They should be courteous, considerate and kind toward victims of mishap; neat, clean and orderly; and yet have no qualms at the sight of death, blood or agony.
5. They should be capable of assuming command in an emergency situation, yet ready and willing to obey the directives of a doctor.
6. They should have a good working understanding of portable rescue equipment and have a desire to keep in touch with improvements of such equipment.
7. They should be willing, ready and capable of following an arranged routine when teamwork is more important than individual action.

The Necessity of First Aid in Rescue Practices

"Protection of life and property" is a phrase that embodies the purpose of

*Los Angeles County Fire Department.

organized fire departments. The prevention of fire and the protection of life and property from fire and other hazardous incidents are the primary purposes of the Fire Service. Therefore the Fire Service has a dual responsibility, and in the realm of public service one function is as important as the other.

Rescue, that part of the Fire Service relating to protection of life, has limitations that must be known to properly conduct rescue operations. Rescue and first aid are synonymous. Without one, the other cannot be a means of fulfilling an obligation. It is probable that in no other public service is the demand for first aid knowledge as great and as varied as in the Fire Service. The fire department responds to almost all types of disaster, the Rescue Squad to even more; and in disaster there is the element of danger that jeopardizes human well-being.

In some areas the Fire Service may be responsible by ordinance or State law for the rescue of persons from fire, flood, earthquake, accident or other catastrophe; or, by ordinance or law, the responsibility may be charged to some other agency and the obligation to the Fire Service only a moral one. Whether legal or moral the obligation is as great in either case.

In most cases, where rescue is necessary, some type of physical damage to the person or persons rescued has been done. It is important that further damage shall be prevented. First aid knowledge is necessary to prevent further damage. Rescue without attendant first aid would have little value.

Limitations on persons giving first aid are strict, legally and otherwise, particularly in public services. To administer beyond these limitations can invite misfortune to the person and criticism to the Fire Service. On the other hand, to fail to do all that it is necessary to do in an emergency, to prevent further damage, can also invite misfortune. Therefore it is necessary to know not only what to do, but what not to do; and, for persons in authority, to know what to prevent being done by willing but untrained hands.

Fire Service First Aid

First aid, as administered by Fire Service personnel, differs from that administered by the householder or other civilian groups. A mother can pour an antiseptic on a child's cut, or spread grease on a burn, bandage the wound or burn, and hope for the best. Fire personnel cannot, or should not, assume this responsibility. Our work is purely of an emergency nature—to prevent further damage until the services of a physician can be obtained.

The application of any substance, internally or externally, other than dry dressings or bandages or water, except in very few cases, can be termed the beginning of definite treatment. We, who are laymen, should not, under the name of public service, attempt anything bordering on medical definitive treatment. To do so we are not only assuming the duties of medical men and leaving ourselves open to possible lawsuit, condemnation, or, at least, criticism; but are in all probability interfering with what the doctor may find it necessary to do.

Assuming that in most cases, in municipal areas, the services of a physician or an ambulance can be obtained by the Fire Service within reasonable time, the simplest answer in first aid is the best answer—providing the simple action is backed by a knowledge of having performed the correct action.

Fire Service first aid for rural areas or areas apart from the facilities of municipalities will be treated later.

Definitions

Asphyxia — Asphyxiation: Oxygen starvation and an over-abundance of carbon dioxide. When carbon dioxide (sometimes called carbonic acid gas) in the blood stream is prevented from free exchange with the oxygen of the air, the blood is poisoned with the result that the heart becomes less excited until pulsation ceases and death ensues.

Bandage: A cloth wrapper in any shape or size designed to hold a dressing, compress or splint in place or as a sling or tourniquet; or to immobilize a sprain or control bleeding. May or may not be sterile.

Bronchia—Bronchus—Bronchial: The tubes leading from the throat into the lungs.

Coagulate—Coagulation: The changing of a liquid, as blood, into a clot, jelly or solid, by heat or chemical action.

Cyanosis—Cyanotic: A livid or blue color of the skin caused by non-oxidation of the blood. May be discerned first at the finger tips, ears or lips.

Compress or Dressing: The cloth or gauze applied directly over a wound or burn. Never use absorbent cotton for a compress. A compress should be sterile, when possible.

Epiglottis: A leaf-shaped cartilage in the throat that covers or closes the upper part of the larynx in the act of swallowing, closing off the windpipe. When the tongue is pulled forward the epiglottis is held in an open position.

Hemorrhage: Profuse bleeding. May be internal or external.

Oesophagus: The food channel leading from the throat to the stomach. It is in back of, and parallel to, the trachea. Its wall is soft and usually lies flat except when swallowing.

Pleura: The membraneous lining of the lungs and walls of the chest cavity or thorax. Normally there is a minus pressure between the pleura of the lungs and the pleura of the walls of the thorax, leaving no air space within the chest cavity.

Respiration: The act of breathing, or the gaseous interchange which is constantly taking place between the blood stream and the air in the lungs.

Resuscitate—Resuscitation: To revive, or revival of the apparently or nearly dead.

Rigor Mortis: Cadaveric rigidity. Loss of translucency and elasticity possessed by living muscles, causing firmness and resistance to pressure.

Sanitary: Laundry clean, but not necessarily sterile.

Shock: A depressed state of all body functions caused by partial failure of the circulatory system.

Sterile—Sterilized: Free from germs. Any sealed goods marked "sterilized" are no longer sterile after the seal has been broken.

Tourniquet: A surgical instrument or encircling band for compressing an artery in the arms or legs to arrest bleeding. May be of rubber, cloth or webbing. Should never be of wire, cord or any narrow or harsh substance that will damage the tissue. Should be loosened every fifteen minutes to prevent gangrene setting in, in portions of the limbs below the tourniquet. Should be used only as a last resort.

Trachea: The windpipe leading from the throat to the bronchia. The wall of

Burn treatment is a job for the doctor—and preferably in a hospital, where sterile equipment is available. Here a 10-year-old boy has his burns dressed, while his sister, four years of age, sits sobbing as she waits her turn. Both were burned at a flash fire in a Chicago tenement early this year.

the trachea, unlike the soft wall of the oesophagus, is armored with cartilage and remains rigidly open. It is in front of the oesophagus. By pressing slightly on the larynx or Adam's apple (also armored), the oesophagus can be held closed.

The Three Dire Emergencies

There are three types of accident to the human body that require instant and correct action to save a life. The action must be accomplished almost automatically. It can be accomplished automatically and correctly only with a background of understanding of reasons. If some type of action by those at the scene has not been taken, response by the rescue squad may be too late.

The three accidents mentioned are: hemorrhage and serious bleeding, stoppage of breathing and serious burns, in that order. In all other accidents to the human body, time can be taken by rescue personnel to think clearly and work quietly and efficiently. With a background of understanding, the answers are simple. The actual rescue, of course, may have to be performed as automatically and instantly as the first aid. Premeditation and planning here, too, are necessary.

Hemorrhage and Serious Bleeding

Serious bleeding must be given first consideration in any accident involving persons. Death can take place within two minutes when serious bleeding or hemorrhage occurs. The bleeding must be stopped in the quickest way possible. The quickest way is the most obvious way: direct pressure over the wound.

If sterile gauze is immediately available, use it for a dressing between the hand and the wound; but don't waste time. If sterile gauze is not immediately available, any cloth, sanitary if possible, will help. Fresh blood is slippery and it is difficult to staunch the flow with the bare hand. If the wound is gaping, try to hold it closed.

If the wound is on the torso, neck or head, add more of whatever you are using for a dressing as the blood soaks through without moving or removing the original dressing. When the flow is slowed enough to coagulate, bind the padding firmly enough to prevent it from slipping.

If the wound is on a limb and you cannot stop the flow with direct pressure and you are not thoroughly versed in the use of pressure points, resort immediately to a tourniquet. If part of the limb is severed, immediate use of the tourniquet is obvious and no further comment is necessary. No further damage could be done to the missing member below the tourniquet. Bind the wound with pads of gauze and bandages. When the blood coagulates, release the tourniquet slowly. Do not wait more than fifteen minutes before releasing. Remember, the tourniquet can be a dangerous instrument.

Keep the victim lying as quietly as possible. Exertion will cause greater bleeding. Try to soothe him and prevent him from seeing the wound. When possible, the bleeding portion may be elevated to help staunch the flow. If the wound is in the chest and the lung is punctured, you may have to prop the victim up in order for him to breathe.

If the ambulance has arrived, do not waste time with elaborate bandages. This victim needs immediate medical attention and probably blood transfusions.

If the hemorrhage or bleeding is internal, it is strictly a medical case. Keep the victim lying quietly. Turn his face sideways or turn him on his stomach if necessary if there is draining or vomiting. Administer oxygen if there is any evidence of a cyanotic condition.

If the wound is abdominal with the intestine protruding, keep the dressing moist with salt water (one teaspoon salt to one pint water). Do not try to push the intestine back in. Prop the knees up.

Use all means possible to arrest bleeding before attempting to extricate the victim from wreckage unless there is immediate danger from fire or other menace.

Do not give stimulants in any of the above cases.

Treat for shock.

Stoppage of Breathing

When accidents cause stoppage of breathing, the victim may die within six minutes. Asphyxiation rates second in consideration at the scene of an accident where persons are involved. If an approved resuscitator is not immediately available and set up for action, start manual artificial respiration without delay. Use any method convenient as described under "Manual Artificial Respiration."

Gentle handling is imperative for victims of flame. Here a Chicago fireman carries out a child, one of six children injured in a flash fire in a crowded tenement in that city on March 27, 1952. Ten adults were also injured.

Unless there is suspicion that there is mud, mucous, vomitus or other solids or liquids obstructing the mouth or throat, do not bother to inspect the mouth until at least one exchange of air has been made. Then inspect the mouth for loose items and position of the tongue. The tongue must be pulled forward or it may relax, cover the trachea, and prevent air from going into the lungs. Loosen the clothing at throat and belt as you can.

If there is continual draining from the throat, try to get the victim into the prone position. Try to prevent any liquid or solid from getting into the windpipe or bronchia.

Compress and release as rhythmically as possible and slower than normal breathing as described under Manual Artificial Respiration.

If the victim starts to breathe, cease artificial respiration but watch him closely; he may relapse; then artificial respiration must be continued.

When the resuscitator has been fully prepared for action, discontinue manual artificial respiration and use the resuscitator. Should the resuscitator fail to function properly, use manual artificial respiration while administering oxygen with the inhalator.

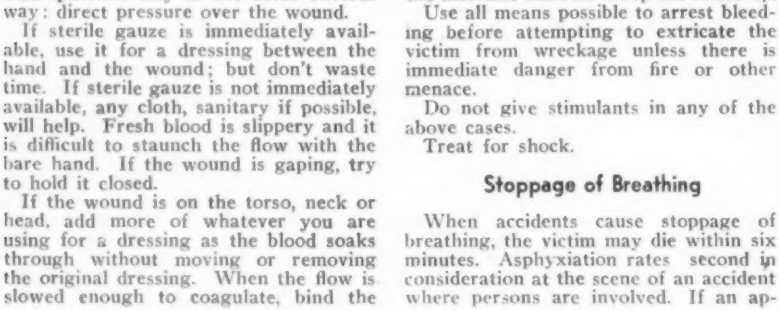
Do not attempt to use the resuscitator and manual artificial respiration together.

Do not give artificial respiration to a victim who is breathing. Do not let a person just resuscitated attempt to rise. The heart has been through a terrific strain and the exertion may overtax it.

Lift the victim into the ambulance without any exertion on his part. If it is not fully determined that the victim will continue to breathe of his own accord, and the ambulance attendant has no resuscitator, then rescue personnel should accompany the victim to the hospital in the ambulance, taking the resuscitator along.

Do not give stimulants.

(*Continued on page* 975)



Accidents happen when least expected. This picture shows two firemen injured by the collapse of a wall at a fire in Nashville, Tenn., on October 9, 1952. Fireman Wade Harman, Jr. (foreground) crawls away from debris, while other firemen pry fallen timber from Fireman William Sout (left background). Fortunately, neither was seriously injured.

Fire Prevention Week Drive Continues To Get Results

Radio Seen Helping F. P. Inspections

A STAFF REPORT

JUDGED by the influx of contributions from FIRE ENGINEERING's readers and correspondents, and the fire prevention lineage devoted to Fire Prevention Week, in newspapers and magazines, this year's observances measured up to the best of other years.

The competition for F. P. Week awards has been so keen during the past decade that it is becoming increasingly difficult to conjure up new promotional ideas and programs. Nevertheless, with the aid of the newcomer television, and the universally effective mediums of radio, motion pictures and the printed word in publications of every nature, the country was well bombarded with F. P. propaganda.

As usual, the fire service—paid, volunteer, municipal, industrial and "private" carried its share of the load, particularly, when it came to dramatizing the dangers of fire in all its dread forms.

This year, with the help of short-wave radio, power-speakers and P.A. systems, the story of preventing fire was taken right into home, factory and other areas. Evidence indicates that building inspections received a big play this year. Not only that, but fire departments took advantage of the observances to do a bit of selling of themselves and their operations to the taxpayers. This appears to be an advantage in fire prevention campaigning that has been too much overlooked by the fire service.

Kingston, Ont., Chief Cultivates Families Through Children

Fire Chief V. C. Brightman of the Kingston, Ont., Fire Department, has a number of reasons why his city has turned in a better record of fire prevention and control during the past year "than did most cities in Canada and the United States."

First, while the Chief doesn't scorn F. P. Week, he believes more keenly in sustained, continual fire prevention campaigning. In this he relies heavily on cultivating householders through their children. Strangely enough, also, he gets much help from the inmates of the large Kingston Penitentiary, which annually cooperates with the Chief and fellow Kiwanians to build and distribute toys for needy youngsters and undertake other departmental good will work. This Holiday drive begins in November, following the October effort.

As evidence of the value of making friends with children, Chief Brightman points out that in four years the number of false alarms answered by his department has decreased almost two-thirds. But this is only one detail of his promotion. One of his most productive efforts has been in a children's fire prevention "examination" which is conducted by the department. This follows lectures and information given young folk and consists of a questionnaire form containing 16 questions which are answered by the contestants. Small certificates are awarded every one who completes the "course," and large certificates are presented the winners. Incidentally, four of the questions deal with turning in fire alarms.

Dedication of New Fire School Features Philadelphia F.P. Week

High point of a busy F.P. Week drive in Philadelphia was the dedication of the fire department's new training school at Ridge ave. and Cinnaminson st., which Quaker City firemen boast is the most modern and best equipped in the United States.

The exercises, attended by about 1500 firemen and guests, were followed by a spectacular demonstration of fire protection at historic old Independence Hall. Answering Box 1776, fire fighters using the most modern equipment, including metal aerial ladders, pumpers, hose tenders and rescue units, threw water-curtains around the venerable building.

Exercises at the drill school, which includes a six-story brick drill tower with complete equipment, include ladder handling and rescue operations by a drill team of 36 firemen—27 hosemen and 9 laddermen. Included in ladder work were scaling ladder use, erection of portable extension ladders, jumping into fire nets, sliding life lines, ladder bridging and aerial ladder operations.

Mayor Joseph S. Clark, Jr., took the occasion in his introductory speech to praise the fire fighters, including tributes to former Chief John C. Cost and Samuel H. Rosenberg, director of Public Safety.

Building Inspections Speeded

Reports received from nearly every part of the country show an encouraging increase in building inspections, resulting from Fire Prevention Week drives. These inspections are not necessarily limited to commercial and industrial occupations but reach into the habitational groups, such as apartments, rooming houses and even private dwellings. In the latter cases, of course, they are largely held by invitation.

The methods of planning for conducting and following up these inspections, vary locally with the basic Fire Prevention programs. Where there is fire department mobile radio, entire company units conducted mass or group inspections. Entire districts are cleaned up more speedily, without the department or company units being "out-of-service" for a minute. And this practice is not limited to the paid departments; it is followed by many volunteer units.

Another interesting and helpful procedure taken is to photograph more serious hazards and use these as evidence for future action. Nor is this also limited to paid departments. For example, the Waldorf Volunteer Fire Company of Waldorf, Md., has undertaken a fire prevention program that includes inspection of buildings in the commun-

With the help of service clubs and even prison inmates, Chief Brightman has sold fire prevention (and reduced false alarms) by cultivating Kingston, Ont., families through their children.

ity, a detail of which includes the taking of photographs of building layouts and hazards. These data are used to acquaint the firemen, who are unable to make the inspection, with problems of fire control and fire prevention.

Area Cooperation Theme in Union City, Tenn.

F. P. Week opened with a bang in the Union City, Tenn. area when a mile-long parade and dramatic demonstrations of fire fighting were witnessed by over 6,000 local and area folk.

A five-city hook-up, backed by generous newspaper and other publicity, staged what is claimed to be the most outstanding F. P. observances ever held in Northwest Tennessee. Union City "Jaycees" under Fire Chief Charlie Quillin and Asst. Chief Charles Scates spark-plugged the program, aided by the local Junior Chamber of Commerce.

Firemen from Murray, Mayfield, Fulton, Ky., and Martin, Tenn., joined with local forces to stage the parade, which featured not one, but five "Miss Flames" selected Beauty Queens, with numerous floats and bands. Each night the fire forces combined to help a different neighboring town promote its F.P. Week program.

A unique feature was a double-page newspaper spread in the Union City Messenger, containing the F.P. Week Program and 16 advertisements of local firms, in each of which was reproduced the portrait of a local fireman in fire hat Each ad also contained a general message on fire prevention.

Games Teach How to Save Lives in Fires

A newly developed program under which children and adults play games to learn how to save their lives if fire breaks out in the home as introduced during FP Week. Basic purpose of the games, described in a booklet by the Liberty Mutual Fire Insurance Company, is to provide the family with a definite plan of action to follow in the event of fire in the home. The theme of the game plays on the idea that the best way to avoid fire is to keep it from breaking out. However, "everybody should have a plan of action to follow if fire does break out despite all precautions" the plan says.

Because one-third of all fire deaths occur among children, the insurance company's games are designed to impress youngsters with the things that must be done instantly in case of fire. "However, in playing these games with their children, the parents will learn too," the sponsors of the idea claim.

Fire Chief Glen Davis of Beloit, Wis., and Stuart D. Klinger combine in picture making stunt. Picture was made on a dark night with Chief Davis spelling out the characters with a large flashlight. Klinger operated camera, shutter of which was opened, while Chief Davis formed one letter with his light. Then shutter was closed and he would move to predetermined spot for the next letter. The process was repeated until the phrase was complete. As last letter was finished, a flash bulb was fired to spot the Chief himself.

Mutual Aid Demonstration Effective in Clifton Springs, N. Y.

Climaxing the F.P. Week activities of Clifton Springs, N. Y., area was a demonstration of cooperative fire fighting. The exercise publicized not only fire prevention but the fire fighters of New York and Canada, who joined in the mutual aid operation.

Fire fighters of Clifton Springs, Geneva, Phelps, Canandaigua, Shortsville, East Bloomfield, Holcomb, Port Gibson, Gorham and Hall stretched lines in relay and direct pumping operations. The scene of the supposed fire was the Foster Building in the center of the village. The exercises included use of ladders of all kinds, ladder and turret pipes, water fog (high pressure and low velocity and first aid and rescue operations, following and prescribed training and mutual aid pattern advocated by New York's Division of Safety Bureau of Fire.

U.S. Airforce Hospital Runs Comprehensive F.P. Campaign

This year the 5005th Hospital Group, at Fort Richardson, Alaska, designated Norris T. Morton (Major USAF) Chaplain to spearhead the organization's F.P. Week activities. Outside the fact that fire badly damaged the hospital chapel during the week, events ran smoothly.

Inspections of heating, electrical installations and trailer court homes were carried on. Fire appliances were checked, as were the hospital Ward Masters in connection with their duties. Airmen were given 1½ hrs of training in use of first aid fire appliances. Fire safeguards were inspected, fire doors ordered repaired or replaced, and so on. Attention was given exit facilities and a study made of communications systems.

An outside display of fire extinguishers was shown and their use described by Fire Chief Samuel H. Huxley of the Fort Richardson Fire Department and Chaplain Morton and Airman Kilgore.

Fire Prevention Week activity in Red Cross auditorium, 5005th Hospital Group, Fort Richardson, Alaska. Lecture was given by Chaplain (Major) Norris T. Morton (left), with A/2c Charles Kilgore (at right) assisting.

The Tarrytowns Get Unusual News Cooperation

On Oct. 4, 1952, the Tarrytown News devoted an entire 20-page, full size newspaper section to promoting fire prevention, and the two fire departments of the "Tarrytowns"—North Tarrytown and Tarrytown. The publishers claim it to be the largest single section of a newspaper ever devoted to this subject.

The pages tie in local news with such subjects as the large fires in the two communities; histories of the departments; outstanding personages and events of the fire service and the like.

Included is a complete account of the North Tarrytown multiple-alarm fire of Feb. 16 last, reprinted verbatim from the March, 1952 issue of this Journal.

Biggest City Gets an "Assist" in Its F.P. Drive

New York City received an "assist" in capitalizing its F.P. Week program in the form of a series of fires, some of

them causing loss of life, which recently has plagued the city. The scandalous housing conditions disclosed by the first part of a survey being conducted by the Commissioner of Housing also focussed attention on the need of more and better fire safeguards, conditions which the fire department has been stressing for many months. The fire department opened its campaign Oct. 6 with Fire Commissioner Jacob Grumet at St. Vincent's Hospital, which carried through a week of exercises, including fire drills, use of motion pictures, tours of fire installations by nurses and other employes.

An effective detail was open house in every one of the city's several hundred fire stations. During the week, companies staged small scale demonstrations to interest local citizens. A number prepared interior F.P. displays, inviting the public to take advantage of the open house.

New York's theme for FP Week was "The same things cause fires every year." Of the 130 deaths due to fire in New York in 1951, 54 were traced to carelessness with smoking, or playing with matches.

Throughout the Week the department carried out most of the usual and a number of unusual promotions. An old-style metropolitan steam fire engine with Christie tractor bearing F.P. placards, tooted its way around the streets; children's essay and poster contests were staged; school lectures, motion pictures and radio talks spread the gospel of F.P. Week.

Service men and civilian personnel at the Army Port of Embarkation, Brooklyn, were given a thrilling demonstration of simulated fire department rescue at a mid-day demonstration. Men of Ladder 110 brought a dummy down from a supposedly burning room. The Base's own pumping units joined in the operation. Running commentaries about the demonstration were given the P.A. by Lieut. Franey of the Fire Department.

Fire Prevention Week Brevities

In Zanesville, Ohio, local firemen were ordered to correct fire hazards. Result: one of the Zanesville fire stations was condemned as a fire hazard. . . . Hearst syndicated papers all featured the 81st Anniversary of the Great Chicago Fire, which burned three days, destroyed some 13,000 buildings, made 100,000 homeless and wrought destruction totalling $200 million, the equivalent of $1 billion today. . . . In Corning, N. Y., the Chamber of Commerce mailed bulky envelopes to 500 merchants in the area as part of its F.P. campaign promotion. The envelope contained loose ashes and a note saying: "This is what remains after a fire." . . . Chicago nearly celebrated the anniversary of the Chicago Fire with a theatre tragedy. A possible stampede of 1,464 patrons at the Blackstone Theatre, who were witnessing a performance of "The Fourposter" was averted by prompt action of Mr. Oshrin, manager of the stage play, when fire broke out in the basement of theatre. He stepped to the stage, just before curtain time, and told the audience "We're having a little trouble. Please step out of the building." The fire was confined by firemen to a small basement room. . . . In North Adams, Mass., 64 inspectors were given definite assignments by insurance companies to conduct a fire hazard survey in Adams on Nov. 6. A total of 121 local buildings were listed for the one-day survey. The Board of Selectmen of the Town praised the volunteer fire department and proclaimed Nov. 6 as "Fire Prevention Day." . . . In Haverhill, Mass., Fire Chief William B. Hunt told the School Board he didn't think there had been enough fire prevention activity on a junior level, recommending a junior fire department like that in operation in Los Angeles. . . . In Norfolk, Va., Fire Chief Woolard turned his firemen into "supersalesmen" to sell fire protection from house to house. Studies of causes and locations of home fires developed sales talks which firemen gave to householders, emphasizing the hazard of smoking. House calls were made by firemen in pairs, working from radio-equipped apparatus which was kept in service by radio. Householders were circularized beforehand, informing them of the prospected visits of the firemen. . . . Minneapolis newspapers, sparked by local fire department promotions, urged readers to "decide now what to do if fire hits your home," quoting former New York Fire Chief John J. McElligott's recommendation that "there should be periodic home fire drills. . . . Volunteer fire fighters of Rockingham, N. C., like many of their fellow vamps, relied on fire control demonstration to whip up interest in F.P. Week, and in their department. Rockingham staged its show on Sunday afternoon, Oct. 5, using their new 750 GPM pumper. Chief Petry G. Covington and his lads were highly complimented. . . . In Dayton, O., firemen, headed by Fire Chief Forrest Lucas, and Chamber of Commerce cooperated in a drive having as a high point prizes such as bicycles and radios for local children winning a F.P. jingle contest. Children were to complete the couplet: "A fireman's job is often tough, especially when the weather's rough. Let's help him to prevent these fires. (Then the finishing line). . . . Canada joined in the observances, most Dominion newspapers and radio stations playing up Canadian fire losses. Last year some 60,000 fires took 493 lives, caused property loss of $76 million was disclosed. . . . In Central Falls, N. Y., fire was no respecter of F.P. Week, when promotional activities had to be interrupted while firemen fought a fire in the Dairy Bar at the Lincoln Woods Farm Co. in Lincoln. . . . Among the volunteer departments that carried out well-planned and executed campaigns is the Martinsville, Va., Volunteer Fire Company. Five definite fire protection problems were set up, each calling for demonstrations by the volunteers. A steering committee was put in charge, with 20 sub-committees looking after details. . . . An interesting observation on this year's F.P. Week are statements of some fire chiefs that they found difficulty in getting widespread local interest in the movement because of the competition for the attention of their citizens created by the national and local political campaigns. . . . Prizes and other inducements continue to spark F.P. Week activities, with emphasis on the small fry. Among the F.P. rewards are those for best essays, posters, letters, store window displays and decorations, and suggestions for F.P. promotion.

"Salute to Firemen" Features Walla Walla, Wash., Observance

Fire fighters of the city, Veterans Hospital, Walla Walla Base and College Place, Prospect Point, and other rural departments, received the accolade to top off F.P. Week in Walla Walla, Wash.

Sponsored jointly by the Chamber of Commerce, Insurance Agents groups and fire forces, the observances included all forms of publicity, showing of the new N.B.F.U. Hospital and other films, speeches and lectures by celebrities, including Jay Stevens and home inspections by firemen.

A specific feature was the presentation of certificates of training to nurses, supervisors and other employes of St. Mary's Hospital and demonstration of hospital fire protection given under direction of Chief Frank Maddux of the VA Hospital, and Chief Leonard Adams of Walla Walla, Wash.

Manhattan firemen capture "Stupid Carelessness," responsible for causing 2,500 fires a day throughout the United States. He was taken into custody during city's Fire Prevention Week after dropping lighted match into litter basket on a New York Street. Henry Ritgerod, public relations director, Arkansas State Fire Prevention Association, acted the part of the clown. He and partner Carl Smalley did clown F.P. act on TV and stage, and will be seen in N.B.F.U.'s new film, "Stupid Carelessness."

NEW YORK CITY OPENS BID FOR NEW DUAL-POWERED FIREBOAT

Separate Engines Will Drive Pumps and Propel Craft; Has Many Novel Features

By Jerry Daly

NEW YORK CITY, the busiest seaport in the world, is going to build another million dollar "dreadnought" fireboat. Of nine boats presently in service, six of them average 44 years in age. One is 49 years, another 48, another 45, two are 44 and one 38. New York has not had a new fireboat since the "Fire Fighter" 12 years ago. The new boat is to replace one that was built in 1898 and condemned in 1949 by the U. S. Government. The launching of the new boat will probably be next summer. In the interim, the name for it is to be given some thought at fire headquarters.

Invitations for bids for the construction contract were advertised through the month of October in the City Record, the official newspaper of the municipality, and bids will be opened on November 19. The new fireboat will be a powerful addition to the marine fleet of the New York Fire Department which protects the Port of New York. It is to have several features that will make it the most formidable and maneuverable blaze beater both for its size and type. The hull is to be protected by a series of three guard rails. There is to be forced ventilation below deck to insure comfort and protection to the engine room crew. There will be no port holes in the hull.

The dimensions of the proposed vessel are 129′ overall; 30′ beam and 9′ draft. The propulsion plant will consist of two diesel engines designed to supply 1,000 H.P. each to a pair of propellers. These engines will be used exclusively for propulsion, resulting in greater flexibility in maneuvering while water is being pumped. The two propellers are tucked in a semi-hollow housing astern to provide for a large diameter wheel and still keep both screws within draft restrictions. This arrangement affords a maximum wheel protection should the vessel go aground. The propulsion engines with their combined capacity of 2,000 H.P. will provide energy that will completely be divorced from the pumping power. This disposition of power permits smooth maneuvering of the boat in congested slips. With the planned engines of 2,000 H.P., the model tank trials have already indicated a speed of over 16 knots.

The fireboat can be used in emergencies as a tug for salvaging exposed or disabled craft from danger by fire. The propulsion machinery can be operated by the pilot.

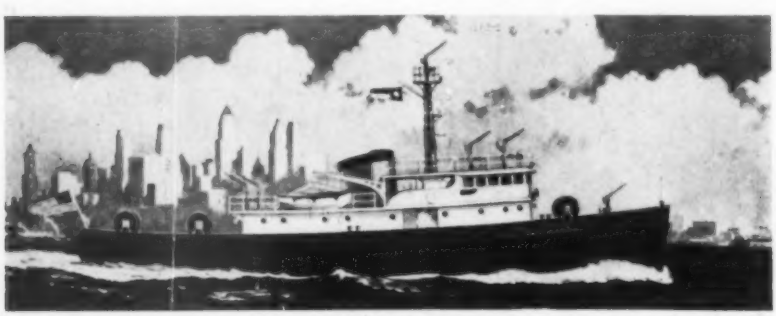
The diesel engines to be used exclusively for pumping have a combined minimum capacity of over 1,600 H.P. They are fresh water cooled and will be directly geared to two pumps. The hydraulic system throughout the boat is of improved design with segregated control valves. Any combination of engines, whether pumping or propulsion, can be operated independently and can be arranged so that in the event of failure of any unit of the propulsive or pumping branch, the vessel still will be able to function as a powerful fireboat. The capacity of the combined pumping units is designed to supply at least 14,000 g.p.m. at 150 lbs. p.s.i., or 7,000 g.p.m. at 300 lbs. p.s.i.

There are five deck pipes to be located on the operating and the main decks, and one located atop a fixed 56′ tower abaft of the wheel house. This location is an improvement in that it reverses the old tower mast aft of the funnel which has existed in the older boats for many years. In addition to the deck guns, there will be rail pipes and two hose manifolds having eight hose connections each. One manifold is at the forward and the other at the after end of the main deck housing, allowing for greater deck space in stretching hose lines. This also keeps the side passageways on the main deck clear for fire fighting action.

The engine room is planned for efficiency and compactness. It is to be 70′ in length, with the driving machinery aft and the pumping machinery forward. The engine room will have special ventilating and air conditioning units. Equipment in the pilot house will include the most modern type of radar and other electronic devices for safer navigation, as well as the latest in remote navigational controls.

All parts of the boat can be reached from inboard, such as access to all compartments, nozzle room, ventilating motor room, fire foam storage, smoke masks, crew quarters, lockers, engine fiddley, etc.

The electrical current for operating the starting motor, lighting, winches, and galley cooking is 200 v. A.C. A ship to shore line will provide for city "juice" when the boat is wharfed. The boat will have sleeping quarters for marine engineers and pilots. There are to be special beds for injured or smoke victims. The crew's quarters will be elaborately and comfortably equipped to seat 25. The bath, toilet and locker accommodations are to be located forward. The galley will have stainless steel kitchen equipment, consisting of an electric range, hot water heater, refrigerator and the inevitable coffee urn.



Architects' drawing of a new million dollar fireboat for the City of New York.

Construction to Be Completed in 1953

Construction is expected to be completed sometime next year. The contract and preliminary plans were prepared by the New York City Department of Public Works under the direction of Commissioner Frederick Zurmuhlen in cooperation with Fire Commissioner Jacob Grumet, Deputy Chief-in-Charge of the Marine Division John L. Holian was assigned by Fire Chief Peter Loftus to collaborate with the Naval Architect, John H. Wells of 515 Madison Avenue, New York City. Wells has been a naval architect in New York for 34 years, and the construction of the vessel will be under the supervision of his staff.

New Inspection Film

"The Magnolia Story," a documentary film showing how special agents of stock fire insurance companies give free fire hazard inspections to towns throughout America, was first shown in Magnolia, Ark., in September.

The film is a pictorial record of an actual town inspection that took place in that community last Spring, and which was staged by the Arkansas State Fire Prevention Association, with the cooperation of the Chamber of Commerce and the local fire department.

The picture was produced by the National Board of Fire Underwriters for distribution by state fire prevention associations and field clubs for showings before public officials, civic clubs, schools, fire departments and other groups. It shows how field men uncovered more than 500 fire hazards in their inspections in a three-day drive and how most hazards were corrected.

The fieldmen's public education efforts are also shown. A colorful fire department demonstration, a parade, fire drills in the schools, and a fire clown stage show were used by the fieldmen to draw attention to their three-day fire prevention campaign.

The 20-minute film, which is in 16 mm color, was written and photographed by J. Wendell Sether, NBFU's director of public information. Sound recording and editing was done by the Fletcher Smith Studios, New York, N. Y.

Prints can be obtained for showing to organizations by writing to the Bureau of Communication Research, Inc., 13 East 37th Street, New York 17, N. Y.

No Future in Collegiate Fire Spitting

Rah rah boys in search of thrills at Ohio State University came up with this one about Fire Prevention Week time. It's an adaption of the old "spitting fire" trick of the vaudeville magician, the extra thrill being given by the use of cigarette lighter fluid in the hands of a neophyte.

The latest suicide fad

The fad consists of taking a mouthful of lighter fluid, holding a lighted match at arm's length and spouting a spray of fluid and vapors over the match to ignite it. The result is a midget atom explosion as the picture shows.

Herman Hill, pre-med' junior at Ohio State, who demonstrates this trick, is still alive, but he has college profs and others in a dither. President Ned Dearborn of the National Safety Council said the fad is "goofier than swallowing goldfish and a thousand times as dangerous."

"The tragic results of such a silly act," he said, "are so obvious it seems an insult to everyone's intelligence to even point them out. This stuff is even faster than aviation gasoline . . . the new fad may be considered very sharp in some circles. But for my money, it's a stupid way to save face, but a good way to lose one."

Preacher Plus Pumper Create New Fire Department

This is the story of a pastor and a pumper. The person in question is Edward F. Reifsnyder. The pumper is now the sole fire fighting unit of the newly organized Mt. Pisgah Fire Department at Mt. Pisgah, N. C., the fire fighting organization at Mt. Pisgah Academy, promoted by Brother Reifsnyder.

It all began some years ago when Mr. Reifsnyder was a student at Mt. Pisgah. There was a fire in one of the campus buildings, which burned down because there was no available fire department. Along about the time Mr. Reifsnyder was being ordained as a Seventh-Day Adventist Minister, the pumper enters the scene. The truck in question, a 500 GPM job with 120-gal. booster, was originally purchased by the Silver Springs, Md., Fire Department. In 1940 it was presented to the then newly organized Hillandale, Md., Fire Department to become that organization's mainstay as a blaze beater. There it saw action, but several years ago it went into retirement when a newer unit was procured. And there it remained until the good dominie came into the picture.

It seems that minister Reifsnyder, who had retained his interest in fire protection, had became a full-fledged volunteer fireman in the Takoma Park Fire Department, also of Maryland, where, in time, he rose to become Captain of his Company, and a very popular person in the organization.

Following his ordination, minister Reifsnyder was assigned as an instructor in the Mt. Pisgah Academy, which comprises a group of some 38 buildings, plus a small farming community.

When it was known that the minister-captain was to leave for Mt. Pisgah, and that the little college community was still without fire protection, it was decided by the vamps that something should be done about the matter.

So, the venerable truck was brought out of retirement by the Hillandale volunteers and given to Mr. Reifsnyder for his about-to-be organized college fire department. Then local paid and volunteer firemen went to work on the old vehicle.

When Brother Reifsnyder left Takoma Park last August, he drove away with pumper and prayer book, happy in the knowledge that his new fire department could sport a rehabilitated fire engine. All he needed upon his arrival at the Academy was some firemen. But this was a small detail to a man of Brother Reifsnyder's organizational capabilities.

The transformation of the somewhat decrepit truck, optimistically reported worth about $600 at the time it was brought out of the mothballs and dust, was the result of the cooperative efforts of paid and volunteer firemen, and friends of the captain-minister. Equipment for the unit was donated by the Takoma Park, Washington, D. C., Alexandria, Va., and several other fire departments. The Dupont Circle Service Co. donated a new coat of red paint. E. A. Reid, a local fireman, donated the lettering, and other commercial firms chipped in. Not the least of the going-away gifts was a copy of the Fire Chiefs' Handbook, and complete set of training manuals presented by Irving W. Johnson and the Maryland University Fire College.

It is disclosed that fire fighting has come natural to the minister-chief. There have been firemen in the Reifsnyder family for over 100 years. His great-grandfather, grandfather and father were firemen in Reading, Pa., his home town. His father was killed at the wheel of a fire truck there. His brother is a volunteer in the local department.

Before departing, his fellow Takoma Park firemen presented him with the badge of an honorary life captain in their organization. Asked what he would do if the siren blows while he's preaching, the 32-year-old slim, mild-mannered preacher-fireman replied: "It would be a short sermon."

Canadian Forums on Civil Defense

A series of one-week tactical fire study forums was held in Toronto during October and November to consider fire problems in civil defense, according to Hon. Paul Martin, federal minister responsible for civil defense.

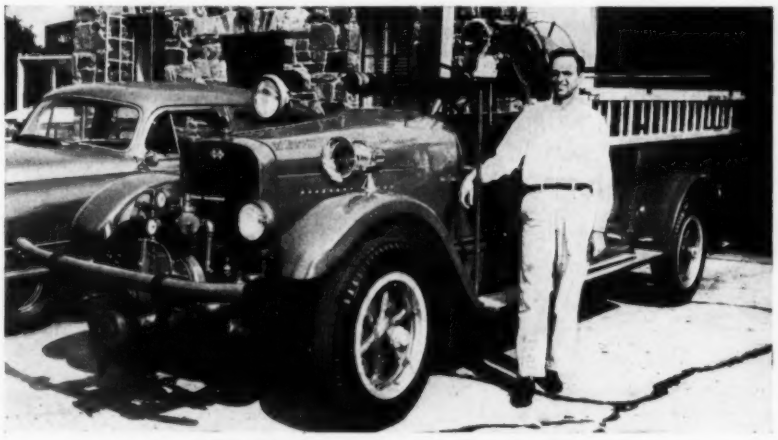
The conferences, directed by Maj. Gen. F. F. Worthington, federal civil defense co-ordinator, reviewed tactical fire-fighting problems under conditions of modern warfare. Experts attending were asked to make recommendations as to the overall policies for civil defense fire fighting in Canada.

Those entering into the discussions included federal civil defense officials, scientists from the Defense Research Board, the National Research Council, the Canadian Army, the University of Toronto, the United States Federal Civil Defense Administration and members of the Ontario Fire Marshal's office.

Among those who attended the first forum, from October 27 to November 1, were fire marshals or commissioners, of each of the provinces, the superintendent of the St. John's, Nfld., fire department, and the fire chiefs of Vancouver, Edmonton, Regina, Winnipeg, Toronto, Ottawa, Montreal, Saint John, Charlottetown and Halifax, as well as officers in charge of fire services in the Canadian Navy, Army and Air Force and representatives from United States federal, state and municipal fire departments.

Forum No. 2., from November 3 to 8, will be attended by the fire chiefs of Victoria and Trail, B. C.; Lethbridge and Calgary, Alta.; Saskatoon, Sask.; Fort William, Sault Ste. Marie, Sarnia, London, Niagara Falls, Brantford, Sudbury, Windsor and Hamilton, Ont.; Hull,

(*Continued on page 979*)



Rev. Reifsnyder and his reconditioned pumper.

Aircraft Builder Gets Crash Truck

Pratt & Whitney Aircraft division of United Aircraft Corporation has recently acquired a new rescue and fire fighting truck with which the company's fire-fighters can apply the latest technique of dealing with large gasoline fires such as those arising from aircraft accidents.

The new truck was built to P&WA's specifications, as laid down by United Aircraft's fire marshal, Henry A. Earsy, and P&WA's fire chief, C. H. Malone. These called for a truck suited to the requirements of operators of private airports such as UAC's Rentschler Field, or small local airports.

The latest technique for fighting aircraft fires calls for laying down a foam-blanketed path through the fire, by which the rescue squad can approach the burning plane, get the passengers and crew out quickly and carry them to safety while the rest of the fire is still blazing. When the rescue is complete, the fire-fighters then deal with the rest of the flames.

Pratt & Whitney Aircraft, in putting the new truck into service, has worked out a number of new refinements of this technique as developed from the experience of a program of training drills. In practice, rescues of an asbestos dummy from the cockpit of a battered old bomber fuselage have been made by P&WA's fire-fighters in a matter of seconds.

The new truck incorporates the latest design of fog-foam equipment. It carries a 1,000-gallon water tank and 110 gallons of double-strength foam-producing chemical. With this amount of water, a total of 9,000 gallons of foam can be generated. When required, an additional 1,000 gallons of water supplied by a "nurse" truck can be utilized to produce another 9,000 gallons of foam.

Feature of the truck is that it has a separate engine to drive the fire-pump, rather than using a power take-off from the truck's engine. This enables the truck to remain mobile while pumping, so that it can lay down a foam-blanketed path right up to the blazing aircraft.

The truck has a large battery of nozzles. Two are mounted in turrets on the roof of the cab, three are fitted to the front bumper of the truck, and two smaller ones are located underneath the chassis. Two additional 150-foot one-inch hand-lines, one on each side of the truck, complete the array. All of these nozzles initially are used to lay down a smothering blanket of foam which clears a safe path through the flames so that the truck and the rescue crew can approach close to the damaged aircraft and make the rescue. The nozzles in the turrets and the hand-lines are multi-purpose, and can deliver fog-foam, a straight stream of foam, water-fog, or a straight stream of water, as required, in the judgment of the Officer-in-Charge. The nozzles on the bumper and underneath the chassis can deliver either fog-foam or water-fog.

Approaching the fire with the wind, discharging foam from all nozzles. Crash truck beats a path through the flames through which the rescue squad can safely approach the burning aircraft.

Biloxi Firemen Stage Ceremonial Parade

Climaxing a traditional celebration which has endured for 69 years, Biloxi, Miss., paid and volunteer firemen, staged "One of the finest parades ever witnessed on the Mississippi Gulf Coast" according to press reports.

The date was September 19, last, and it was a gala day for Biloxi citizens, who turned out en masse to do honors to the fire forces. The latter introduced an innovation, for fireman, that is, when some 60 volunteer firemen paraded on horseback over the two mile, flag draped route. The Grand Marshal, Octave Borries, marking his 41st parade followed by some 15 bedecked aides, led the marchers. Then there came company marshals, each of which had mounted aides to maintain the motif of the occasion. After them came the fire fighters, replete with uniforms, floats and their decorated equipment.

Fire Chief Lee Chinn led this Division in his official car, while Captain Hunt, under an old time fire hat and toting an ancient trumpet, rode a motorcycle. Children of the volunteers joined in the entourage, riding ponies.

Mayor R. Hart Chinn, Commissioners Tony Creel and Gordon Dacey and Sheriff Edward McDonnell occupied another car. Supervisor Dewey Lawrence rode with his own Back Bay Company. Numerous old timers filled other cars.

West End Fire Company drew applause with its float "Liberty . . . Justice For All". The East End Company took for its theme "Old War Hoop", with the vamps dressed as indians riding in a gaily blazoned canoe. "Future Firemen and Sweethearts" was the Back Bay theme, the first of its trucks being loaded with "Miniature Firemen" in the persons of several boys costumed in gold shirts, plus. The second truck contained the "Sweethearts", also gaily caprizoned.

A combination of "Gone But Not Forgotten" and "Key to a Well Deserved Rest" was used by Central Fire Company in its truck decorations.

Although the day was one of merry-making, the ceremonies served to impress the good Biloxians of the progress made by their fire department. Right up front in the parade were the new units of the department, just placed in service.

One of several floats appearing in Biloxi Fire Department parade.

"Worst" Firebug Gets 20-40 Years

Pittsburgh's "worst" firebug was sentenced to serve 20-40 years in prison in August, last. He was John Olliffe, 42, of Forsythe Street, who "got a thrill" out of torching North side schools, churches and private homes, aided and abetted by alcohol. He pleaded guilty to several counts of arson, and felonious burning.

Occasionally he varied his thrill diet with false alarms, admitting he had sent in 25 false alarms on his latest spree.

Olliffe's arrest came about by tracing fingerprints on the lantern found at a home which he had set afire. At first he denied everything, but, under pressure from a lie-detector, he began talking.

The culprit, who was on parole from Western Penitentiary, where he was serving time for other crimes, records show, asked to be sent to the State hospital for the criminally insane.

Thanks E. J. O'Neill

Clio Firemen Boast an Efficient Department

The Clio, Mich., Fire Department may not be the biggest in the country, or even in Michigan, its home state, but the folks of Clio and of Genessee County, in which Clio is located, think it's about the best.

The firemen of Clio, 17 of them all told, operate the Clio Fire Department, Inc. They call attention to the 'Inc.', claiming that to the best of their knowledge, theirs is the only incorporated fire department in the state of Michigan.

Behind their pride, also, is the fact that the members of the organization did most of the construction work on the department's new fire station which also houses the county library, city offices and jail. The firefighters raised the money to pay for the building, about $25,000, and they claim to have some of the best equipment in the state.

Thus far, in 1952, they have fought some 40 fires without a single major loss. But they are not entirely satisfied. They are to further improve their facilities by adding another story on the building, and increasing their fire attack power by addition of more equipment. At present there are four pieces of rolling stock, capable of delivering 1,800 G.P.M. on a fire.

One of the firemen's pet possessions is a snack bar in the new house where "coffee-and" is enjoyed by the lads, along with television.

The Chief of the Clio's Department is Harold Stevens; the Assistant Chief is Allen Jones.

Chief's Home Damaged by Fire of Suspicious Origin

Damage estimated at close to $10,000 was caused to the home of Chief Philip A. Wilson of the Maynard, Mass., Fire Department at 3:30 A.M. July 19. The chief and his family were at their summer home in Rye, New Hampshire at the time. As the fire started in an open breezeway, there was considerable speculation that it might have been of incendiary origin. The fire occurred just two days after the climax of a long see-saw controversy on the application of a small chemical firm from Chicago, for a permit to store 200 drums of cellulose nitrate in an old mill building in the center of the town. This firm intended to make Pyroxylin lacquer bases.

Early in the year this firm applied for a permit for highly flammable solvents, and as there was little opposition, and the chief was in favor of it, the permit was issued by the selectmen. Shortly after the granting of this permit, the firm filed another application for the permit for cellulose nitrate. At the public hearing on this application, the chief, who is by profession an attorney, favored the granting of this permit also. However, there was formidable opposition, so the hearing was adjourned until March 24, at which time the law partner of Chief Wilson presented the case for the company and introduced several technicians who minimized the hazards involved in the handling and processing of cellulose nitrate. After a lengthy debate, the chairman asked for a vote of the people present. The vote was against the granting of the permit. The selectmen then formally denied the application.

The company then appealed their case to the State Fire Marshal, but before a hearing was scheduled, they withdrew their appeal, and started a campaign to gain the sympathy of the townspeople. Paid advertisements were run in the local newspapers and girls were paid to canvass the town for signatures on a petition. They gained the favor of the local chamber of commerce and the local branch of the Textile Workers Union. With this backing and the fact that they had spent considerable money on the building and had brought in the storage tanks for the solvents, they confidently applied for another hearing before the selectmen. This hearing was merely a repetition of the first one; the same arguments and the same vote of the people. The selectmen this time reversed their previous decision and granted the permit. A Group of citizens then appealed the action of the selectmen to the State Fire Marshal who, after a hearing and an investigation by inspectors of the State Department of Public Safety, revoked the permit.

HENRY T. HANSON.

Fire Hazard in Brewers Grains

A number of fires in feed mills of New York State, one of which resulted in loss of life and injuries, brought an investigation by the Bureau of Fire, Division of Safety of the State. As a result of its findings, the Bureau issued a Memorandum on Oct. 9, from which is quoted the following:

The fires in question all originated in storage bins of a grade of feed known as "Brewers Grains." These are the residue of the grain used in the brewing of beer.

The spent grains are sold in bulk at the brewery. In this form, the product contains grains varying from coarse to very fine. It is usually very wet, and is often at a temperature as high as 180 deg. Farmers who buy the grains use them almost immediately. Feed dealers store dry, and distribute the grains. The length of storage depends on market conditions, distance and method of distribution.

Brewers grains are subject to spontaneous heating if they are not properly dried before storage or shipment. This drying must be completed, within 24 hours after removal from the brewery, to a moisture content of between seven and twelve per cent. Drying to less than seven per cent results in an oxidation of vegetable oils remaining in the grains, and spontaneous heating to the ignition temperatures will follow. Grain with a higher moisture content will heat due to fermentation. During heating, it is reported that combustible gases are given off, and a serious explosion hazard may exist if sufficient oxygen is introduced.

The following procedures are recommended in case of fire or extreme heating involving a bin of brewers' or distillers' grains.

Do not permit anyone to enter the bin. (1) Stretch and charge hose lines with fog nozzles to all sections of the building, especially to the top of the bin and to the floor of the building immediately below the bin. (2) Wet down all dust with a spray or fog stream. (3) Ventilate the building. (4) Remove all grains from bins that are heating. This grain may be removed by the existing hoppers, or a section of the bin floor may be removed. *All grain must be removed from the bottom of the bin.* A spray or fog stream should be directed across the opening so that all grain is removed through the spray or fog pattern. Fog should also be directed into the top of the bin while grain is being removed. The most dangerous time of the operation is as the bin is nearly emptied. If air should enter the bottom opening in sufficient amounts to cause a draft, or to agitate the grain, an explosion might occur. As a preventive measure, the nozzle at the top of the bin should be placed in solid stream position and used to flush the balance of the grain out of the bin. High nozzle pressures should not be used for this operation. (5) Finally, *do not permit firemen to enter the bin until all grain has been removed.*

Underwriting Own Liability Insurance

It has been suggested to the Executive Committee of the Maryland State Firemen's Association that the Association underwrite its own liability insurance on apparatus. According to a statement in the Association's Bulletin, it is estimated that its member companies pay out at least $50,000 every year for liability insurance.

House of Chief Philip A. Wilson, Maynard, Mass., after fire. Fire entered windows and a kitchen door leading to breezeway, causing heavy damage to interior.

Airport Has Powerful Pumping Plant

Power and pumps capable of throwing 34,000 gallons of water per minute have been installed for fighting building fires that might occur at New York's International airport at Idlewild, Long Island. The Port of New York Authority has provided enough capacity to combat two simultaneous separated fires, large enough to require wide open deluge systems.

To give as flexible and dependable a system as possible, there are two identical batteries of five centrifugal pumps, one driven by five diesel engines having a total of 1,690 hp. and the other by five electric motors of 1,460 hp. combined. In addition, a 20-hp. motor-driven make-up pump of 100 gallons per minute capacity maintains a pressure of 165 lb. per sq. in. in the entire water supply system, which consists of ten miles of pipe.

Each group of pumps includes two of 2,500 gallons per minute capacity and three of 4,000 gallons per minute capacity. Drive motors for these pumps are rated at 210 and 350 hp. respectively at 1,765 rpm. Diesel engines are Superiors with 8½-in. bore and 10½-in. stroke running at 720 rpm. They are rated at 260 and 390 hp. respectively. The three 390 hp. engines are turbo-charged. Pumps are driven at 1775 rpm by means of herringbone gearing.

There are four storage water reservoirs having a capacity of 1,000,000 gallons, which serve as an emergency source of water for fire fighting. Normally city water is supplied through a 36-in. main and a 30-in. main on opposite sides of the airport.

Each pump may be valved on or off the line by motor-powered valves. If the city water supply drops to 15 lb. per sq. in., the main valves are closed automatically and water is drawn from the emergency reservoirs. These valves remain closed until city pressure is restored to 35 lb. per sq. in.

An electric power failure would put only the motor powered pumps out of service. Emergency electric power for lighting, alarm and control boards, make-up pump, air compressors, fuel transfer pump, motor-operated valves, and raw water pump would be supplied by a diesel-powered 100-kw generator for which automatic starting equipment has been provided. After the emergency generator is automatically started it continues to run for ten minutes following restoration of power from the utility line. It stops then only if all equipment is operating properly.

Woods Fires Peril Wide Areas

As October waned, brush and forest fires burned fiercely throughout much of the Eastern half of the United States. Fires flared in woodlands and farmlands in about half the 48 states, giving firemen of all categories extra duty.

Except for snow flurries in Wisconsin and some sections of Vermont and New York, the thousands of Forest Rangers, National Guardsmen, municipal fire fighters and townspeople, and even school children, got no help from nature. The weather Bureau logged no moisture and promised none.

An assistant forest superintendent in Missouri said it was the worst situation in 18 years. There were similar comments from officials in New Hampshire, and Massachusetts, which closed their woodlands to the public; in Kentucky 16-year-old boys were excused from school to help fight the flames; in Pennsylvania, suspension of the hunting season is being considered.

In Arkansas, State Forester Fred Lang warned: "The forest situation is out of control." In New York, despite snow in Ulster County, more than 3,000 acres of woodland had been scorched by fire between October 26 and 30th. The largest blaze swept 700 acres near Caroha Lake, Fulton County.

Conditions in the far West were not much better. Tinder-dry Rocky Mountain Empire forests faced threats of fire as drought conditions continued, Denver papers reported. A rash of fires in Wyoming's Big Horn National Forest caused fears of large scale destruction, but Rangers and volunteers brought them under control. Eleven forest fires burned up 695 acres of pine woods in east Texas on Oct. 24, and a few days later fires spread through nearly 6,000 acres in the same vicinity. Colorado, managed to control 31 forest fires.

Upward of 300 firemen from eight volunteer departments of Maryland and Virginia, including Fairfax, Burke, Annandale, Baileys Cross Roads, Franconia and Mount Vernon, fought a mile long blaze, handicapped by lack of water. Over 30 pieces of fire equipment were used. Several firemen were overcome.

In New York, a 16-year-old boy volunteer fire-fighter vanished during operations in the Adirondacks while helping 75 other volunteers control a blaze that burned 1000 acres and was believed lost. He walked into camp, however the next day, uninjured, having escaped flames by climbing Hogback Mountain.

Pumping station for fighting fires at Idlewild Airport on Long Island, N. Y., is powered by five diesels and five electric motors. Each set of pumps can throw 17,000 gallons of water per minute, either from city mains or from four reservoirs in the building which hold 1,000,000 gallons of water.

G.E. Groups Emergency Needs

A central safety station, reportedly first in the company's history and possibly the first in industry in the U. S., has been installed at General Electric Company's chemical materials plant in Schenectady.

Centralized station for safety equipment and supplies is installed in General Electric Company's chemical materials plant, Schenectady. View of station with doors open, shows variety of safety gear kept in readiness against practically any emergency. Such grouping eliminates the danger that an employee will be unable to locate the masks or a stretcher or fire extinguisher in a hurry when he needs them.

The station groups all major safety devices for each section in one large, convenient and extra-visible place, in contrast with older arrangements in which the safety equipment was scattered and spotted at many different, hard-to-remember locations.

As rapidly as possible, six to eight more of these central stations will be established in the plant. Similar stations are planned for GE's Coshocton, Ohio, plant, and other plants of the company's Chemical Division will "have their safety gear so arranged as rapidly as safety engineers can determine the most logical places" for centralized safety stations.

With their bright backgrounds, painted safety green, and the white-and-red equipment boxes, the stations will be clearly visible from a distance.

In the Schenectady central safety station the equipment and supplies were selected to meet practically any emergency. They include a bottle of wash for caustic, together with sterile gauze application pads; an MSA all-service gas mask; a collapsible stretcher; a treated fire blanket; an asbestos suit; two self-generating oxygen units for use in oxygen-deficient atmospheres; and a hand fire extinguisher.

Large signs and lettering identify the station and each equipment box so that even a brand-new man in the plant could quickly locate the safety gear in an emergency.

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Why Fireman Wear Red Suspenders!

This'un for the department of red faces: Thanks to the C'Costa Gazette (Contra Costa, Calif.) we now know why firemen wear red suspenders, yezzir. Whitey Klaus, fire chief of the Associated Oil Plant near Concord, climbed onto a chair to set an electric clock — whereupon Secty. Bergami shrieked and ran out of the room. Fire Chief Klaus, who wasn't wearing red suspenders, looked down and discovered his pants at half mast. Belt slipped.

Thanks to ARTHUR BUSS

* * *

Boy Adds Hot Finalé to Backyard Circus

Billy Davis, 11-year-old "ringmaster" of a backyard "Kid's circus" in Grand Junction, Colo., wound up the show with a grand finale that would have done credit to old P. T. Barnum himself.

Billy came tumbling out of a tree house, 15 feet above the heads of his audience—with his pants on fire.

Billy said, after the tumult and the shouting had quieted down, that he and three of his promoters had planned a "flaming torch" act to end the show. Their equipment was a jar of gasoline and a match. But they hadn't counted on just that kind of an act.

Billy wasn't especially hurt—so's anybody could notice it, and nobody minded the unscheduled "flaming dive," especially when the fire department roared up with sirens going, and doused the flames in the jar.

* * *

Tain't Funny McGee!

Three boys on the roof of a six-story apartment house at 1951 Walton Ave., the Bronx, lit a mop and dropped it over the edge of the roof one afternoon, about 3:00 P.M.

Result, three fires in four apartments—and much excitement and confusion. The burning mop ignited drying laundry at window sills on the fifth, fourth, third and second floors, which in turn, touched off window curtains.

Firemen, responding to an alarm, did some fast work and held damages to the minimum. The boys? They went that-a-way.

* * *

Contributor McDonnell Reporting-in

FORT ERIE, ONT.—This happened in this busy community which, by the way, is about the only place of its kind that has two fire chiefs, each directing his individual fire department within the single community.

Harold Lang, walking to work, saw smoke pouring from a house. He went in, awakened and saved Mrs. Ann McConnell and her daughter, called the fire engines and walked on down to his job—as a fireman in Buffalo, N. Y. (just across the border!).

JOHNSON CITY, TENN.—J. S. Riddick went to sleep in a hotel lobby and set his chair on fire with a cigarette. He was a delegate to the Tennessee Firemen's Association convention.

LANSING, MICH.—Bus driver H. E. Dilengbeck thought the heat was getting him. The automatic coin counter was clocking up fares like crazy, but there weren't any passengers coming in the door. The counter started to smoke and Dilengbeck called firemen when it burst into flames. The Brothers blamed a short circuit in the coin box.

CAMBRIDGE, MASS.—Nocturnal imbibers at a secluded lake near this place have become unintentional firebugs. For four days in a row, fires were started in pine needles by the rays of the sun passing through empty liquor bottles.

* * *

No Wonder the Deisers Were Burned Up!

The Maurice Deiser home is in Muncie, Ind. It has electricity n' everything. The electricity had been off at the home for a bit, and Mrs. Deiser went out and stocked up on groceries for a good hot meal, when the utility "service men" reported the trouble was fixed. Note: "service men" is quoted because of the aftermath! With everything supposedly in order, Mrs. Deiser's daughter complained that the radio wouldn't work. And when MRS. Deiser turned on the No. 1 burner in the electric stove, the radio started playing, but the stove didn't cook.

When she turned on No. 4 burner the radio stopped—but the stove wouldn't start. But when she plugged in her electric iron, the stove then obligingly started cooking.

Fortunately, no fire resulted from the strange phenomenon. P.S. the "service men" haven't figured it out yet!

* * *

Hot Off the Tape

Three Grand Haven, Mich., firemen who volunteered to help a cottage owner burn dead grass on his lot, were humiliated no end when the blaze got out of control and they hadda call out the whole gang to snag the blaze. . . . Fire Captain Walter Seville of the Syracuse, N. Y., Fire Department was uninjured when his crew's pumper collided with a tractor-trailer. But he needed the department physician's care—when he was bitten by a dog, excited by the commotion of the accident. . . . In August, it's said, townsfolk of Naugatuck, Conn., pitched in to feed 15,000 firemen attending a convention there. Hundreds of housewives made sandwiches for a total of 50,000. Now you tell one! . . . Ah-h-h where were we on the night of August 19 last! That was when during a barbecue party held in her honor, television actress Dagmar leaned over the firery pit—and the front of her blouse caught fire. Her husband, Danny Dayton, quickly quelled the flames with his hands and quipped: "That almost put Dagmar out of show business!" . . . In Richmond, Va., a fire alarm brought five pieces of apparatus and other assorted rigs to the scene, where the assignment was met by red-faced Fire Chief John Finnegan who sheepishly admitted that it was a false alarm. Excuse? Alarm accidentally sounded when the Chief spied an alarm box door open, and tried to close it. (Thanks to many who dispensed this item.). . . Out in Santa Paula, Calif., one Santiago Rodriguez, 60, wasn't quite sure if he should appreciate what his neighbors did for him. Rodriguez fell asleep smoking a cigarette. Neighbors saw smoke pouring from his room and seizing a garden hose, obligingly shot a stream of water in his window. Result—Rodriguez was taken to a hospital after firemen worked for 15 minutes to pump water and smoke out of his lungs! (Thanks IRVING JOHNSON.) . . . In Buffalo, N. Y., a 9-year-old boy was rescued from a fire one day, only to drown in Lake Erie a few hours later. . . . The sun, a glass jar of turpentine and a dust mop combined to cause a $3,000 fire in the home of Mrs. Ernest Drouin of Lebanon, N. H., recently. Fire department officers said the sun pouring in a window caused an explosion in the jar of turpentine, which ignited the dust mop and spread the flames. . . . There's considerable what-to-do in Grottoes, Va. Seems that fire companies from near-by communities staged a bang-up parade on August 22nd, at which the Vamps of Waynesboro won first prize for the company with the best band. Swell! Only the Waynesboro boys have no band. The judges are supposed to be investigating. . . . William G. Horwath, of Hartford; Conn., termed the city's "phantom rubbish burner," literally talked himself right into a jail cell recently. Horwath called the city editor of a Hartford newspaper, and during a half-hour telephone conversation, insisted he be arrested. "Hold the phone," said the editor, "and I'll see what I can do for you." The editor got on another phone and notified the police, who obliged, seizing Horwath as he continued talking. They said he admitted setting as many as nine fires during a single night in front of downtown stores. Thanks, TOM MAGNER.

* * *

Bull Dog, Bull Dog—Bow, Wow, Wow!

Asst. Fire Chief Jerome C. Barrett, of the Bridgeport, Conn., Fire Department, is the proud owner of Yale University's new football mascot, Handsome Dan VIII, shown here with his owner. The three-year-old English bulldog, made his debut in the famous Yale Bowl on Saturday, Sept. 20, at the opening game of the 1952 season between Yale and the University of Connecticut.

Yale's new mascot.

The animal, who first started winning blue ribbons at the age of five months, is now three years old. He is solid white, has a low slung jaw, a nose which looks as though he had rammed a brick wall, and a pair of front legs which resemble parentheses.

TOM MAGNER

News of the Manufacturers

Pyrene Demonstrates New Foam for Alcohol Fires

A new alcohol-resistant foam, good against fires in all flammable liquids, was shown for the first time on October 2 to a group of top military and civilian fire-prevention engineers by the Pyrene Manufacturing Company, Newark, N. J.

New foam applied to alcohol blaze. This picture was taken at the very instant a stream of new Pyrene air foam was turned on a fire in isopropyl alcohol. Ten seconds later the blaze was out.

The new foam was used to put out fires in ethanol and acetone and also in oil in a bank of transformers. The demonstration was part of a fire show staged by Pyrene on its Newark proving grounds, primarily to exhibit the company's new equipment for discharging air foam.

Among the equipment was a big turret nozzle which threw 10,000 gallons of foam per minute 150 feet.

A telescopic foam tower reaching 50 feet into the air and used to feed foam over the lip of a storage tank in which there might be a fire was also displayed. Other equipment shown included forcing-type foam makers, a spray-type foam maker and a nozzle which discharged either a spray or a heavy stream at the will of the operator.

The show opened with a spectacular gasoline fire in a cut-away storage tank 35 feet in diameter. The flames were quickly extinguished by foam from a permanent installation with foam maker and discharge nozzle mounted on the side of the tank.

The Alcohol Resistant Foam Compound was developed specifically for use against fires, in "water soluble solvents" as defined in the N.B.F.U. Pamphlet No. 11 (1950); but it is equally effective against oil and gasoline fires and may, therefore, be considered as an all-purpose foam compound.

It is a dark brown liquid having a specific gravity of 1.2, similar in appearance to Pyrene's 3% low expansion foam compound, although slightly more viscous. It is a protein base material and has certain characteristics of low expansion foam compound. It is prepared in a different manner, however, than the company's low expansion compound, and contains special ingredients to render the foam stable to alcohols.

The compound is equally effective in fresh or salt water and is intended to be used at a concentration of 6%. The foam produced at this concentration using Pyrene foam making equipment is highly stable. The time for 50% of the water to drain out of the foam, known as the half way drainage time, has been measured in excess of 12 hours.

The compound can be used with satisfactory results in any equipment which has been designed for low expansion foam compound—although the best foam is obtained when used in conjunction with the company's new playpipes.

The flammable liquids which the foam has successfully dealt with are: Gasoline; Methyl Alcohol (Methanol); Ethyl Alcohol (Ethanol—Synasol—industrial alcohol); Isopropyl Alcohol (Isopropanol); Acetone (Dimethylketone); Methylethylketone (M.E.K.); Isopropylether; Diethylether; Isopropyl acetate, and Acrylonitrile.

After a fire, when a square was cut from this blanket of alcohol-resistant foam and unburned alcohol was reignited, it could be seen along the edges of the cut-out that there was no injury caused the foam by alcohol below. The alcohol is burning here (note wispy flames of brighter white against the foam) to denote its presence.

Republic Appoints W. H. Hunter

Wayne H. Hunter has been appointed Assistant Sales Development Manager of the Republic Rubber Division, Lee Rubber and Tire Corporation, Youngstown, Ohio.

Wayne H. Hunter

In announcing the appointment, G. L. Smith, Republic's Sales Manager, said that Mr. Hunter would assist J. M. Hughes, Sales Development Manager, in the advertising, sales promotion and sales training phases of merchandising Republic's line of belting, hose, packing and molded rubber products.

Mr. Hunter joined Republic in March of 1949, immediately after graduation from Ohio State University. In August of 1949 he was transferred to St. Louis, Missouri, as Field Engineer. He was reassigned to the Youngstown Sales Department in December of 1951 and joined the Sales Development Department in March of this year.

New Color Sprinkler Film

A new 16 mm sound fire protection film "Crusaders Against Fire" produced in color, sponsored by the National Automatic Sprinkler and Fire Control Association of New York City, is available for showing free of charge starting September 1, 1952, to service clubs, business associations, industrial plants, fire chiefs associations or any group interested in fire protection. The film is of 16 minutes duration.

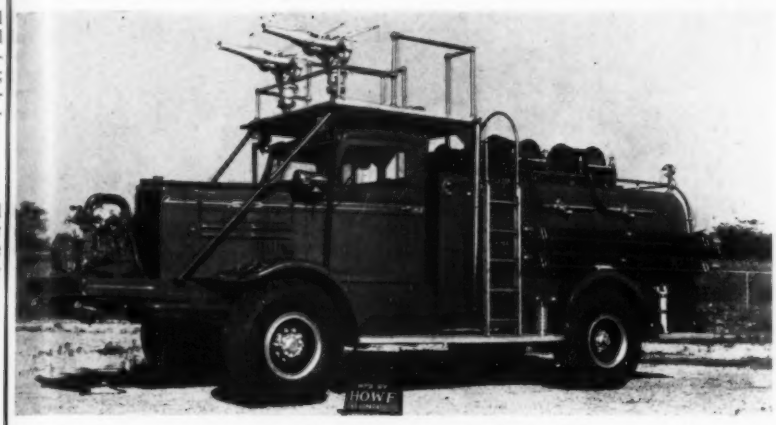
Additional information concerning this film may be obtained by writing the National Automatic Sprinkler and Fire Control Association, 205 East 42nd Street, New York 17, New York.

Willard U. S. Rubber Factory Manager

Henry W. Willard has been appointed factory manager of United States Rubber Company's Passaic (N. J.) plant, succeeding William C. Bowker, who retired September 30, it is announced by Ernest G. Brown, vice president and general manager of the company's Mechanical Goods Division.

Mr. Bowker recently completed 47 years of service with the company. He started in the Passaic factory as a clerk in 1905.

Mr. Willard, 41 years old, started with



New Howe-Oshkosh Fire Fighter.

United States Rubber Company in 1929, working as an office boy during summer vacation. In 1934 he began as a time clerk in the Passaic plant, and since then has held a wide variety of positions. He was promoted to the office of general superintendent on May 19, 1950, and assistant factory manager on January 2 of this year. He is a graduate of Cornell University, and while with the United States Air Force, attained the rank of lieutenant colonel on active duty in the Southwest Pacific Theatre.

Straw Named Bendix Head

Lawrence J. Straw has been named Mobile Sales Manager of the Bendix Radio Division of Bendix Aviation Corporation it is announced by Arnold Rosenberg, General Sales Manager of the Division. Mr. Straw will head up a newly created national sales engineering organization, selling the Bendix line of two-way radio and communications systems. Bendix has just entered this field after concentrating for many years on avation communication and navigation systems and railroad radio.

Straw joined Bendix in February 1952, having previously been associated with Capehart-Farnsworth as Service Manager and as Assistant to the General Manager of the Technical Products Division. Prior to this he had been associated with Raymond Rosen Engineering Products in Philadelphia.

Ceremonies Launch Howe's New Howe-Oshkosh Fire Fighter

A newcomer in the field of crash trucks and structural fire fighters was introduced to a select audience on July 24, last, at Anderson, Indiana, home of Howe Fire Apparatus Company.

The ceremonies began with a luncheon for guests, representing the U.S. Coast Guard, Navy, Air Force, Corps. of Engineers; the Rockwood Sprinkler Co., Oshkosh Motor Truck, Inc., C-O Two Equipment Co., Clifford Hannay & Sons Inc., Howe Fire Apparatus Co., and city officials of Anderson, as well as representatives from fire departments and municipal airports over a wide area.

After lunch came a tour of the plant followed by the trip to the demonstration field where the new fire fighter was inspected and put through its paces, during which fires of different types were attacked and extinguished, using all the varied facilities of the unit.

The new unit was conceived in January, 1950, when the Howe Fire Apparatus, along with the Oshkosh Motor Truck, Inc., first began development of a crash truck. Later, when the U.S. Coast Guard became interested in the creation, the combined ideas of the three produced the present model, which is claimed to be different from anything in its field.

According to its builders, it is equally well suited for combating airplane crash fires and fighting structural fires.

In brief, the unit is equipped with a Waterous CF-1 front mount pump, which has 500 GPM Class A Underwriters test approval. With this pump-engine combination, for fog or fog foam operation, the pump will produce 500 GPM at 350 PSI. Equipment also includes Rockwood fog foam equipment, such as 2 turret nozzles of 200 GPM capacity, 3 Rockwood ground sweep nozzles with 30 GPM capacity; and one Rockwood undertruck nozzle with 20 GPM capacity. There are also mounted on the unit two 100 lb. CO_2 cylinders, as well as a 1,000 gal. water tank with removable tank top, and a 100 gal. foam tank. Also included are 4 Hannay Electric re-wind reels, 3 for fog foam operation and one for CO_2 discharge.

In addition, the unit carries a large list of other miscellaneous equipment, including short ladders and fittings.

His Business Is His Hobby

Once in a blue moon it falls to the lot of a fire buff, spark, or fan, to be able to combine avocation with vocation. Such a lot fell to Ernest (Ernie) N. Day, president of the New Jersey Fire Equipment Corp., of Dunellen, N. J.

Not only has Ernie managed to make sufficient cabbage out of his business to erect an attractive new general offices and show room, but he has managed to 'cabbage' a considerable collection of fire service incunabulia (relics, to the laity) which provide his growing business with the right historical motif and background.

The new building is located at the

New home of the New Jersey Fire Equipment Corp.

Corner of Ernie Day's fire equipment museum. Ernie is shown at left holding an old leather fire bucket.

corner of Highway 29 and Washington Ave., Dunellen, along the main highway from New York to Pennsylvania. an ideal location inasmuch as many fire officials pass that way daily. The structure is 60 x 91, two stories and quite unusual in character. Downstairs is a lobby which sports a built-in aquarium with running water, gold fish, etc. Then there is an attractive reception room, the executive and general offices, a directors' conference room, and a lounge room on the second floor.

Located on the first floor also is a large showroom with space enough for ten fire engines, a stock room and service shop. Here, too, is the very interesting museum, pride and joy of Ernie. In fact, somebody once said Ernie would rather get his hands on a genuine old side-brake or tub pumper than to grab off a good size order for a modern quad. The museum would tend to bear out the statement.

Ernie's quest for relics of the fire service took root 16 or 18 years ago. Today the collection boasts a cart used by Humane Fire Company No. 1, of Philadelphia in 1794 and old steamers from Harrisonburg, Va., Clayton, N. Y., and Mechanicsville, Pa. Then there is a hand-drawn hose cart, and a bewildering array of old trumpets and other mementos of the "dear dead days" of yore.

The company distributes Goodrich Fire Hose for the State of New Jersey, Pirsch and Oren fire apparatus, Akron Brass products, Sterling fire sirens, Hale pumps, together with a complete line of firemen's clothing and fire fighting appliances.

Members of the fraternity will be certain of an interesting and friendly welcome should they drop in on Ernie Day and the New Jersey Fire Equipment Corp.

Distributor Uses Display Truck

Earl A. Brooks, Fire Control Equipment, R.D. No. 2, (on Route 30) Coatsville, Pa., is another of the nation's top-notch distributors of fire apparatus and equipment, serving municipal and industrial fire forces in Pa., Del., Md., and N. J.

Not only does Brooks maintain a modern, well stocked showroom of fire fighting tools and accessories, but the proprietor himself takes his business over the road to his clientele, by means of his Fire Control Truck which, to all intents and purposes, looks like it belonged to some alert rescue company.

Showroom of Earl A. Brooks Fire Equipment.

Featuring nationally advertised and known needs for fire fighters, Brooks manages to squeeze into his portable Fire Control unit over 200 tools and accessories, including extinguishers, portable pumps, nozzles and fittings, signaling devices, lighting equipment, first aid and rescue supplies and facilities etc.

Buyers' Guide for Fire Protection Equipment

A new, indexed, 40-page Buyers' Guide for portable fire extinguishers and fire fighting accessory equipment, just published by The Fyr-Fyter Company of Dayton, Ohio, illustrates a complete line of fire protection equipment for every type of fire hazard, and describes applications, special features, construction details, and pertinent specifications.

It includes reference material on the meaning of Underwriters' classifications, chemistry of fire, instructions for how to operate extinguishers, and a check chart, showing how to select the proper extinguisher for particular hazards.

The guide is available in either bound catalog form, or loose leaf sheets with a convenient labeled file jacket. Copies may be secured from The Fyr-Fyter Company, 221 Crane Street, Dayton, Ohio.

Craft for Marine Rescue and Other Use

Through the "Round Table" and other surveys of rescue, first aid and emergency apparatus, FIRE ENGINEERING has disclosed the broad use of and desire for small boats by the fire service preferably powered by outboard motors.

Most of the craft in service are ordinary rowboats, converted to fire department use and powered by outboard motors.

A concern has recently come forth with a boat that incorporates most of the features sought for by rescue, first aid and emergency forces. The firm is Badger Boat Builders, Couderay, Wis., and the product is the "Badger Boat."

One of the members of the concern who happens to be chief of the local volunteer fire department, has had ample opportunity to study marine rescue and fire operations first hand. Four years ago, the company started work on specialized designs of outboard-powered boats for use as auxiliary fire units and for rescue and recovery work. The goal has been to build a boat that can utilize outboard power combined with proper aids for water rescue and fire fighting in a unit that was flexible yet sturdy, and easily transportable.

Tests of the first of these boats have been completed. Among the features claimed for the craft are: one man operation if necessary, yet able to carry 6 or 7 in an emergency; construction to withstand unusual stress and impact of rescue work; ability to operate in debris-filled water and as an ice-breaker through ice that will not support the weight of a man; plenty of speed when desired.

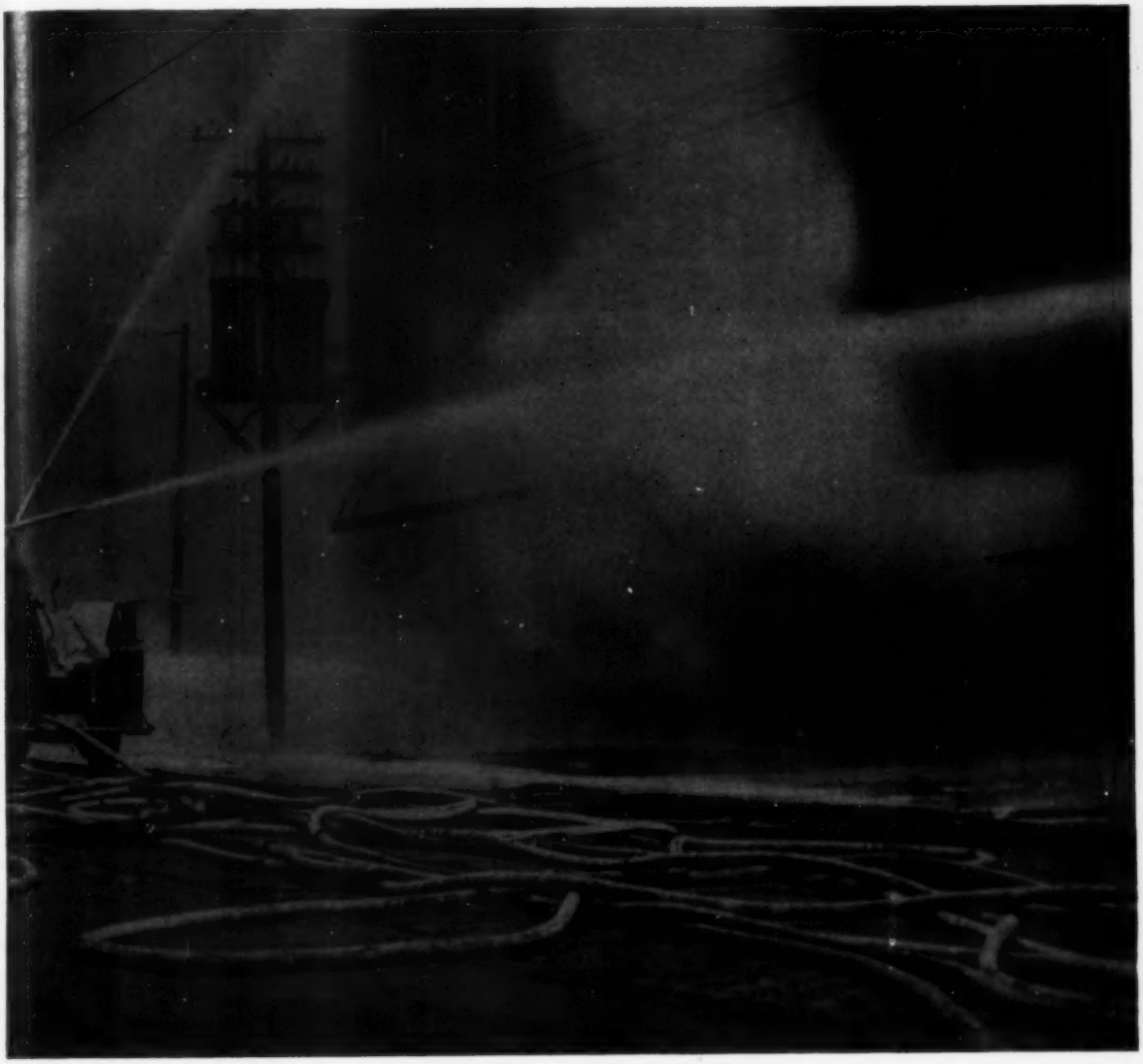
The entire outside of the Badger Boat is covered with strong, tough laminate of Fiberglas, adding strength to the hull yet if damaged, is easily repairable on the spot. The Fiberglas insures a tight boat whether boat is kept in the water or not. Weight is ample to provide stability and handling qualities in bad weather even though manned by only one or two men.

With normal loads, using 10 to 25 H.P. motors for power, speed of 20 to 30 MPH can be maintained (boat has been clocked at 27 MPH with four passengers and operator).

Sides of the boat are kept low enough so that a victim can be taken over the

(*Continued on page* 978)

New "Badger" rescue and emergency boat.



Slugging it out...

When you have to deliver the heavy punches, it's best if you have Eureka Hose. It gives you maximum nozzle pressure with minimum friction loss, does not writhe or serpentine. Other reasons for Eureka's superiority:

SMOOTH-INTERIOR FILLER PLY, an exclusive Eureka development, prevents "washboarding" of rubber lining, eliminates an increase in pump pressure.

BALANCED-WEAVE CONSTRUCTION, in both multiple-woven and double-jacket hose, prevents dangerous writhing and twisting under high pressures.

MILDEW-PROOFING: Double-jacket hose can be furnished antiseptically treated or wax and gum treated to prevent mildew and rot.

BOMB-TESTED RUBBER LINING guarantees longer wear.

EUREKA

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Cotton Rubber-Lined Fire Hose

195 Hudson Street • New York 13, N. Y.

Division of United States Rubber Company

Short Cuts and Gadgets

AN IMPROVISED EXTINGUISHER

It may be a bit unorthodox, and possibly an idea that you wouldn't care to pass along to the man-on-the-street, but it's a novel "gadget," nonetheless.

We refer to this suggestion from *Popular Mechanics*, Sept., 1952: "Inexpensive Fire Extinguisher Utilizes Plastic Container: Small, inexpensive fire extinguishers that will shoot a stream of carbon tetrachloride up to 10 feet are improvised quickly from plastic squeeze-type containers. Remove the nozzle head from the container and enlarge the openings with a needle so the extinguisher will throw a steady stream. Then fill the container with carbon tetrachloride and replace the cap. It is best to use a 3 or 4-oz. container which can be sealed tightly to avoid evaporation of the chemical. *Caution:* Be sure to provide adequate ventilation when using this chemical, as the fumes are likely to be dangerous.—Jack H. Lewis, Willow Run, Mich."

* * *

THIS LOOKS LIKE A TIME AND HEADACHE SAVER!

"Any fireman will agree that those double dual chains are a headache to put on," writes R. Budd Loder, Middletown, N. Y., paid fireman and driver, and he adds—"and when you are putting them on sometimes the inner side chain falls down in between the duals, and Brother, from there on you do some tall cussin' and praying to get them out."

Brother Loder claims that with his gadget you can put both sets of chains on in 5 minutes. The old way, he claims, used to take him almost an hour, struggling with them.

This gadget consists of a spring steel clamp, 3/16 inch stock or flat steel, bent to conform with the contour of the dual tires. It has three hooks, one on the outer edge, one in the center, and one on the outside edge.

The idea is simply to lay out your double dual chains in the rear of the truck, put the clamp on the tires, hook the side links of the chains to the clamp, drive the truck ahead and make a complete revolution of the wheel, and the chains are by then wrapped on the tires better than any man can put them on by jacking up the truck and throwing the chains over the wheels.

According to contributor Loder: "anybody who would like a set of these chains just write to me and I'll be glad to send them a set." He doesn't mention anything about cost, but adds that every truck in his department has a set and insists they really are a time saver—wrapping on better than anyone can put chains on by hand. You remove the clamp, he says, once the chains are on.

* * *

MARKING THE DEAD CENTER

The Kensington, Md., Volunteer Fire Department has indicated the exact center of every section of fire hose with an identifying mark. Knowing the exact center of a section of hose will permit a workmanlike job on the evolutions of hose advancement, rolling donuts, and picking up after a fire.

Maryland Firemen's Bulletin

* * *

INCENTIVES FOR COMPANY ATTENDANCE

Normally it isn't so difficult to persuade the dyed-in-the-wool vamp to attend company meetings and drills, but there comes a time when company attendance records of members take a nose dive.

One way some units make it worth while for personnel to keep up their attendance records is to offer some sort of inducement for attendance.

For example: The Martinsville Volunteer Fire Company, Martinsville, Va., has a cash attendance prize, the winner's name being drawn in a capsule from among the names of the entire company.

Thus we read in the Company's interesting little house organ "The Hose Line" that: Shelton Scales was the 'loser' last meeting because he was not present when his name was drawn for $20.00. It will be to your advantage to be present this meeting (October) because drawing the capsule will continue until it is won." The October prize was $25.00.

Clamp for putting chains on dual tires.

SIGNS RECENTLY PLACED ON NARROW STREETS MOST USED BY FIRE APPARATUS.

THANKS TO CLARENCE WOODARD, FIRE PREVENTION ASSOCIATES

Here's a "short cut" that appeared in FIRE ENGINEERING many years ago. The idea is just as good today as then.

OLD SAWS—AND FIRE ALARMS

Notwithstanding the continual increase in the use of the powered fire alarm to alert the volunteer firemen of small communities, settlements, private fire brigades and institutions, there are many that are still using the "armstrong method," with the old railroad tire iron, or railroad rail, bent like a triangle.

One of the most sought for "instruments" for this purpose, are large worn out circular saws which may be secured from saw mills or other plants.

These are mounted on wooden frames, so suspended that, when struck, a powerful gong-like sound is produced that can be heard for great distances.

* * *

BURNING TIRE AIDS BACKFIRES

Here's an idea we picked up from Popular Mechanics, (Aug. 1950 issue):

To facilitate starting backfires in spreading grass, brush and forest fire operations, use an old discarded auto tire. Tie a length of wire to it to permit its being dropped along the ground after it is well afire.

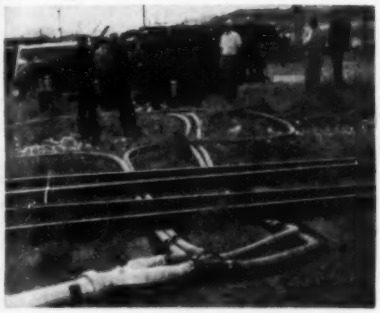
To facilitate igniting the tire, stuff it with old rags and paper and add a bit of kerosene or other flammable to "boost" the flame. Simply drag the burning tire across the material to be ignited.

* * *

The Old Timer Says—

Why is it that so many cities are shy about putting lettering or signs on firehouses? Why keep 'em a secret? Should think it'd be a good idea to let everybody know where a building houses a fire company. If not so indicated, how can you blame a person who mistakes 'em for a private garage, or other occupancy—and parks right in front, or maybe overlooks 'em in searching for a means through which to give an alarm of fire?

WHEN DISASTER STRIKES...



From pumper to Quick-Coupled Pipe...

...over uneven terrain...

...to high pressure nozzle.

be ready with AMES QUICK-COUPLED "ABC" PIPE

Have your supply of pipe available *in advance*. When disaster strikes...it's too late!

With an Ames emergency supply line you can have plenty of water under high pressure *where* and *when* you need it. Long lines of this lightweight, sturdy aluminum pipe can be set up through rubble-filled streets in a matter of minutes. The "one-man" pipe sections, equipped with "ABC" Couplers, are automatically locked and sealed by water pressure. With ample flexibility at each joint, lines are quickly laid over or around piles of debris, delivering effective volume and pressure wherever it's needed.

Ames portable "ABC" Pipe has been tested* for the State of California Civilian Defense Board. Write for full details of tests and operating data on Ames equipment.

The AMES BALL COUPLER

No bolts, hooks or latches. Instantly coupled and uncoupled from the carrying position. Easily withstands any normal operating pressure. "Ball and socket" construction allows 22° flexibility at each joint.

***REPORT ON TEST OF AMES QUICK-COUPLED "ABC" PIPE**

CONDITIONS: A 980' line of 6" "ABC" Pipe (20' sections) with 3 elbows was set up under conditions simulating streets full of rubble. Water was taken from a city fire hydrant into a fire department pumper, where pressure was increased. At the terminal end of the pipe line, water was taken by hoses into a fire-truck equipped with standard nozzles. Various inlet pressures were employed, and several nozzle sizes were used as the volume increased.

RESULTS:

From Hydrant psi.	Outlet of Pumper psi.	ABC Line Inlet psi.	ABC Line Terminal psi.	Nozzle Tip psi.	Discharge Nozzle Sizes	Gals. Per Min.
48	150	135	105	63	1¾"	778
47	200	180	145	74	2"	1023
43	220	190	120	60	2½"	1166
55	240	240	240	(Static test)		

(Pipe weighs 43 lbs. per 20' joint, including couplers)

W.R. AMES CO.

150 HOOPER STREET

SAN FRANCISCO 7, CALIFORNIA

AMES

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

OUT OF TOWN AID

HOW FAR should a fire department extend its aid, particularly into surrounding farm areas and other places beyond its political subdivisions? Should its services be given, without fee, or should they be charged for? If the latter, on what basis? And how does the kind and type of fire department, and the availability of facilities such as water and apparatus, bear upon the subject?

These and related questions form the basis for the Round Table discussion beginning with this issue; one that, judging from the broad interest created by this study, will have to be continued in later numbers of this Journal.

The replies to the October questionnaire which were sent to a selected list of FIRE ENGINEERING'S readers provide food for considerable thought.

There appears to be no serious disagreement on the wisdom or practice of a fire department providing outside fire protection, but apparently there are certain provisos that must be met. One is the question of jurisdiction—the legal responsibility of just where a fire department's allegiance begins and ends. Another is the important question of remuneration for protective services rendered, and of responsibility for the payment of services, and also for liability coverage of men and apparatus responding to out of town areas.

Still another point raised by respondents is the responsibility of those outsiders (on farms, in industrial or other plants) for making fullest use of the protection they receive from municipal or district fire forces. At present, it appears that farmers, for example, are slow to provide water supplies.

The respondents to the current questionnaire introduce collateral details, such as the influence and responsibility of the insurance companies in supporting, or not supporting, fire services in this connection; the influence of modern improvements in fire service communications, such as radio, and in fire fighting equipment, such as pumpers equipped with large booster tanks, water fog, proportioners for wet water, and foam and other facilities. The readers will find it well worth their while to carefully study these installments to this interesting Round Table.

Readers are invited to contribute to this Round Table which will be continued in the December issue. Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Topic

Lewis K. Zirn, Chief, Coldwater, Mich.: Our fire department provides fire protection to three townships and is often called into four other surrounding townships.

We answer alarms with a fire truck housed in our fire station which our city maintains and has the use of on all city fires. This truck was purchased by the three townships. Our department furnishes a driver with three firemen on all alarms. The farm group pays to the city $75.00 for each alarm answered.

For any alarms answered outside these three townships we collect $100.00, of which the city receives $75.00 and the rural group which purchased the truck, $25.00.

The Farmers' Mutual Insurance Company pays to the city $25.00 for all alarms answered where insurance is carried by them on the property involved.

We have sixty-four beautiful lakes in our country and most farms have a ready supply of water. We also carry a supply of about 2000 gallons—400 gallons on the fire truck and followed by a tank truck containing 1600 gallons.

Our department has a full-time chief and four full-time drivers and twelve volunteers.

We have made quite a survey of the systems used in departments around our state and find our system compares very favorably with those we have come in contact with.

Hobart G Lindgren, Chief, McPherson, Kans.: We supply fire protection to five townships and two oil refineries. Our charge is $50.00 per year standby plus $50.00 for each fire call to townships and $100.00 a year standby and $100.00 for each fire call to refineries.

We ask that farmers keep their stock tanks, etc., full at all times, but this is not always done.

Our department has eight paid men and twelve volunteers, who are called for every alarm we receive, in or out of town.

Our system has worked out quite well so far. We send a 500-gallon pumper with a 200-gallon booster tank to rural areas with not more than three firemen. To the refineries we send a 750-gallon pumper with not more than four firemen.

J. Oliver Kehs, Chief, Freehold, N. J.: Our Borough is situated in the midst of a large rural area, containing many large farms and residential properties. When our department which had been organized in 1872, received its first piece of motorized equipment (an American LaFrance truck carrying two chemical tanks of eighty gallons each) in 1915, we were the only means of fire protection for this area. The people of this surrounding country made Freehold their shopping center, and this department in turn provided them with fire protection. This protective service we still provide.

This rural fire protection is supplied by the Good Will company of our department. This company maintains three pieces of apparatus for this service. There are no direct charges for this protection. The townships which are covered by this protection make yearly contribution to this company, and individual donations are received from the residents of the protected area.

The apparatus used for this coverage consists of two boosters carrying 500 gallons of water each, and one tank truck carrying 1000 gallons of water. Besides booster hose these trucks also carry an ample supply of one and one-half inch hose. Some farms have brooks which are capable of supplying water for pumping operations, but in the majority of fires we must furnish our own extinguishing agent. We are fortunate in having other departments in the vicinity

(*Continued on page* 967)

HERE IS THE TOPIC

1. **Does your fire department provide fire protection to surrounding farm areas?**
2. **If so, do you make a charge for this service? What are your rates?**
3. **If no charge is made, do the farm districts compensate the fire department in any other way?**
4. **If no charge is made, and the fire department is not otherwise compensated, in what way does your city benefit from this free service?**
5. **Where rural service is provided, do the farms provide a ready supply of water; or do you depend upon water carried on the apparatus?**
6. **Is your fire department paid or volunteer?**
7. **Has your system worked out satisfactorily?**

No. 4 of a series of 6

ANSUL

DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT

Extra Services and Plus Values
available without cost to users of
ANSUL
DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT
. . . . your Best Protection
FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

MODEL 30-B

•• INSPECTION OF EQUIPMENT

Factory trained representatives will periodically inspect all Ansul Fire Extinguishing Equipment in the plants of customers desiring this service. There is no charge or obligation in connection with this Ansul service. Upon completion of each inspection, the Ansul representative prepares a written report on the equipment's condition to be retained by the customer.

Frequently Ansul men also conduct refresher courses in fire-fighting techniques for our customers' employees.

For more information concerning Ansul services, contact your nearest Ansul representative.

FRANCIS G. HOOD MEMORIAL BLDG., MARINETTE, WIS.

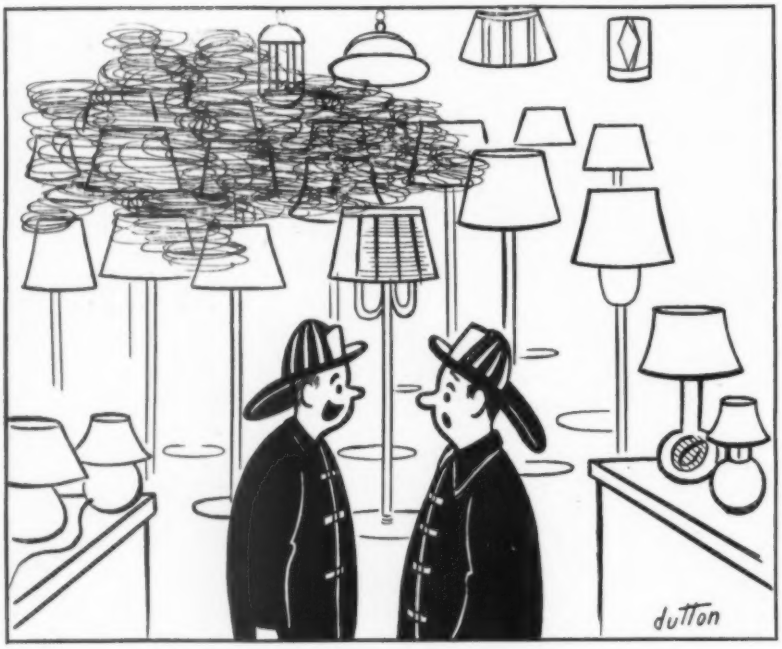
Send for File No. 446. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units. Also included is additional information on Ansul Services.

ANSUL *Chemical Company*

FIRE EQUIPMENT DIVISION • MARINETTE, WISCONSIN

OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES IN THE U. S. A., CANADA AND OTHER COUNTRIES
ALSO MANUFACTURERS OF INDUSTRIAL CHEMICALS, REFRIGERANTS AND REFRIGERATION PRODUCTS

FALSE ALARMS



"Offhand, I'd say it was started by a short circuit!"

Next Time—Eyes on the Road

A motorist and his wife hadn't spoken for miles. They'd got into a quarrel and neither would budge. Suddenly the man pointed at a mule in a pasture they were passing. "Relative of yours?" he asked.

"Yes," the wife replied, by marriage."

He Didn't Turn the Other Cheek

Mother: "When that smart alec got fresh with you last night, why didn't you slap him?"

Daughter: "I did and its the last time I'll ever slap a man when he's chewing tobacco."

"When Noah sailed the water blue
He had his troubles same as you.
For 40 days he drove his ark
Before he found a place to park!"

"Who was that lady I saw you out with last night?"

"I wasn't out, I was just dozing."

Mrs. Blue: "Do you know I caught my husband flirting?"

Mrs. Chew: "Well, of all things! That's the way I caught mine too."

Zeke, the oldest of a family of 21 children, was out in the field one day, observing Air Force maneuvers. When the paratroops started plummeting downward, Zeke dropped his hoe and dashed toward the house, shouting, "Pa! Pa! Grab yore shotgun. The stork's a-droppin' 'em full growed!"

The pen with a lifetime guarantee: Alcatraz.

Death Rate

A young sanitary engineer was planning sewers for a rural village which had never been sewered before. Trying to estimate the size of sewers, based on the probabilities of population growth, he went to the city clerk—a creaky gaffer, well into his eighties. "Say, friend, what's the death rate around here?" the young engineer asked.

The ancient clerk paused to expectorate into a handy spittoon, before replying: "Same as everywhere, sonny. One to a person."

Manager: "I hear you and the leading lady are on the outs."

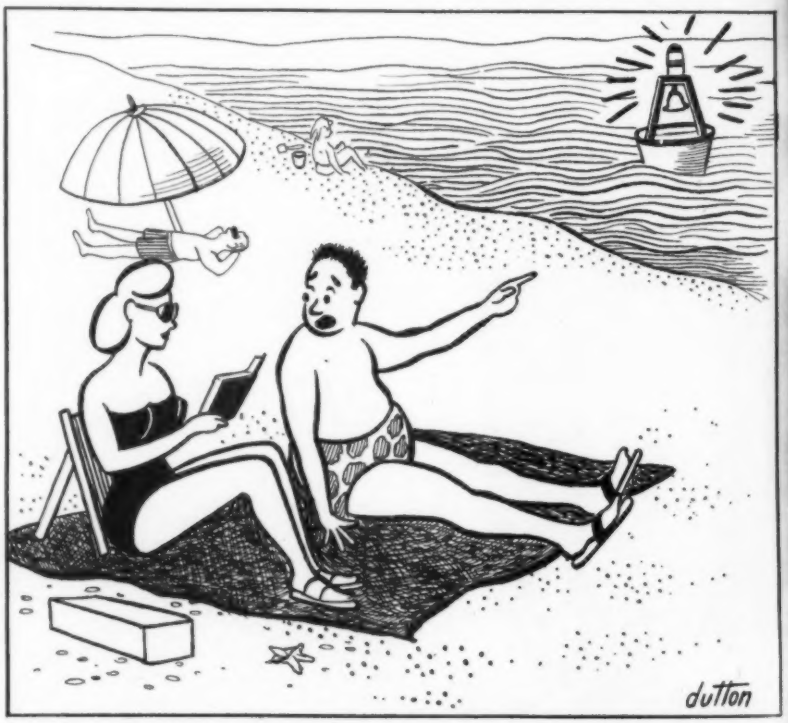
Electrician: "Yeah! It was one of those quick change scenes with the stage all dark. She asked for her tights and I thought she said lights."

"Have you any more explanations about the difference between married men and bachelors?"

"Well, one difference between a bachelor and a married man is that when a bachelor walks the floor with a baby, he's dancing."

Speaker: "I have lived in this town all my life. By actual count there are fifty-five tap rooms and saloons in the town, and I am proud to say I have never been in one of them."

Voice: "Which one is that?"



"I just can't relax, dear. That buoy sounds too much like a fire bell!"

PACK 3 FEET ... IN SPACE OF 2!

LIGHTER — STRONGER — FLATTER FOLDING QUAKER HOSE GIVES YOU 33% EXTRA SPACE FOR PACKING EXTRA FIRE-FIGHTING FOOTAGE

Compare these actual photographs of compact Quaker "Easy-Fold" Hose with ordinary bulky type construction. Here's proof that you get up to ⅓ more storage space with Quaker Fire Hose. You can pack 3 feet in the space of 2 in truck beds and on racks. Quaker gives you extra fire fighting protection . . . without the extra bulk!

New Quaker design and construction mean flatter folding, greater flexibility, easier handling. Extra tough cotton jacket resists abrasion and heat. Expertly compounded rubber tube is non-acid forming. It won't dry out, become brittle or crack.

Don't gamble with your fire protection. Be safe . . . be sure . . . buy Quaker. Order from your nearby Quaker distributor today.

SEND FOR YOUR COPY

. . . of new illustrated Quaker folder. Full of useful tips on "How To Get The Most Out Of Fire Hose." Write today.

QUAKER RUBBER CORPORATION

DIVISION OF H. K. PORTER COMPANY, INC.

PHILADELPHIA 24, PA. • BRANCHES IN PRINCIPAL CITIES

Fight Forest Fires From Moving Truck

with a HALE Type FZZ Portable Pumping Unit!

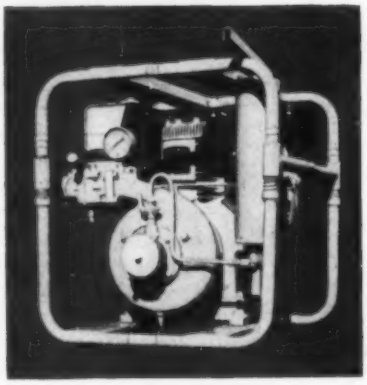
Below are two on-the-spot pictures showing a Hale Type FZZ Portable Pumping Unit fighting a brush fire from a moving truck. The unit can be mounted or carried on virtually any type of equipment, making it extremely valuable for fighting brush, field and forest fires while in motion. Booster tank is used for source of water.

The Hale Type FZZ is a powerful, sturdy, ready-to-use unit built specifically for fire fighting. Compact, dependable and efficient, it will stand long hours of continuous pumping. The unit will supply from draft, 60 U. S. Gallons per minute at 90 lbs. pump pressure, and up to 150 U. S. Gallons per minute at 30 lbs. It can supply two capable fire streams through 1½" hose lines using nozzle tips up to ⅞".

The Hale single stage centrifugal pump is bolted direct to a sturdy four-cycle 8.25 HP, single cylinder, air-cooled engine.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. It can be easily carried to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct.

Also available mounted on two wheels or on rubber-cushioned steel channels.



NOTE: Discharge Adapter can be supplied for use with 2½" fire hose.

● **Write today for new FZZ Folder.**
Let us know if you want a demonstration.

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of October, 1952.

Month Ending October 31, 1952

Elk Creek, Cal.—Sawmill of Johnson Lumber Co., Humboldt County, destroyed.
Eureka, Cal.—C. & M. Lumber Co. destroyed.
Fullerton, Cal. — Mutual Orange Distributors packing plt. destroyed.
Redding, Cal.—Pacific Gas and Electric Co. office and whse. destroyed.
San Carlos, Cal.—Devonshire Country Club destroyed.
San Diego, Cal.—Tuna clipper Senator, destroyed. Short circuit.
San Jose, Cal.—Storage bldg. owned by William N. Norgan, destroyed.
Denver, Colo.—Flour mill plt. of Denver Flour Mills Corp. destroyed.
Berlin, Conn.—Service station and garage owned by William Poppel, destroyed.
Laurel, Dela.—Marvil Packing Co. whse. for storing fruit boxes, plywood doors and other wood products which it manufactures, destroyed.
Seaford, Dela.—Hotel Sussex damaged.
Jacksonville, Fla.—Jacksonville Recreation Center destroyed.
Miami, Fla.—Cheely Lumber Co. office bldg. and millwork storage damaged.
Alma, Ga.—Alma Theatre bldg. and Bacon Masonic Lodge destroyed.
Cedartown, Ga.—Newspaper plt. of Polk County Times destroyed.
Gainesville, Ga.—Composing and press rooms of Daily Times damaged. Heating equipment.
Summerville, Ga.—Newly remodeled office bldg. of Georgia Power Co. destroyed.
Waynesboro, Ga.—Waynesboro Veneer Co. plt. destroyed.
Decatur, Ill.—Parkway Inn night club, outside city limits, destroyed.
Nashville, Ill.—Nashville Milling Co. plt. damaged.
New Berlin, Ill.—Island Grove grain elevator destroyed.
Peoria, Ill.—Howard Printing Co. damaged.
Ware, Ill.—Grain elevator of Ware Grain Co. destroyed.
Evansville, Ind.—Vandeveer Dodge and Plymouth automobile agency, damaged.
Kirklin, Ind.—Canning plt. and whse. of Searle Food Corp. damaged. Gasoline in tractor exploded.
Lebanon, Ind.—Boone Grain & Seed Co. offices and whse. damaged. Explosion.
Mooreland, Ind.—South Christian Church storage barn and garages, destroyed.
Scottsburg, Ind.—T. V. Novelty Co. plt. destroyed.
Wabash, Ind.—Plt. of Spencer Cardinal Cabinet Corp. damaged.
Clinton, Ia.—Bennett Sawmill and Lumber Yard destroyed.
Council Bluffs, Ia.—Blue Star Goods garage and three-story whse. of Continental Keller Furniture Co. destroyed.
Des Moines, Ia.—Bldg. housing Little Giant Crane & Shovel, Inc., makers of dragline cranes under government contract, destroyed.
Des Moines, Ia.—Bldg. housing Jefferson Apts. damaged.
Estherville, Ia.—Horse meat extraction bldg. at Davis Packing Co. plt. destroyed. Gas explosion.
Waterloo, Ia.—Bldg. housing Josef's shoe store and that housing Walker's shoe store, damaged. Rubbish fire.
Wichita, Kans.—Branch whse. of Kroger Grocery Co. destroyed.
Fulton, Ky.—Bldg. occupied by law office of Frank Carr, Warren Jewelry Co. and Democratic campaign headquarters; and adj. bldg. occupied by Fry's Shoe Store, Dr. B. L. Davis office and other offices, destroyed.
Princeton, Ky.—Rothrock's Cafe and two bldgs. of Morgan's furniture store, damaged.
Baltimore, Md.—Marlene shop and Reads drugstore damaged.
Lowell, Mass.—Wilder Grain Co. damaged.
North Andover, Mass.—Farm bldgs. of North Andover Cattle Co. damaged. Spontaneous ignition of hay.
Revere, Mass.—Derby Racer Roller Coaster destroyed.
Grand Rapids, Mich.—Beckering Construction Co. whse., in Wyoming Township, Kent County, destroyed.
Hudsonville, Mich.—Farmer Co-Op Elevator destroyed.
Jackson, Mich.—Clubhouse of Jackson Country Club destroyed. Defective oil heating equip.

TRIGGER-QUICK

For split-second action . . . pull the trigger on a *Kidde* CO_2 portable fire extinguisher. Flame-smothering carbon dioxide blankets the fire . . . kills it instantly.

Walter Kidde & Company, Inc.
1133 Main Street, Belleville 9, N. J.

Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

The word "Kidde" and the Kidde seal are trade-marks of Walter Kidde & Company, Inc. and its associated companies.

Kidde

CAIRNS

PERSONAL EQUIPMENT FOR FIREMEN

Think of the many advantages of buying ALL your personal equipment, from head to foot, from one dependable source —from a firm able and ready to assume responsibility for the quality of EVERY item, and to stand back of it with a reputation gained in serving firemen for more than a hundred years . . . . Here is a partial list of the equipment we can supply, promptly. Many other items are described in our Catalog, sent on request.

TURNOUT SUITS

RUBBER COATS

RUBBER BOOTS

RUBBER-LINED MITTENS

ASBESTOS GLOVES

SAFETY BELTS

TRAFFIC OFFICERS' BELTS

CAPS

BADGES

HELMETS

LEATHER
ALUMINUM
FLINT-FLEX

REGULATION
and
OTHER STYLES

AND, FOR THE DEPARTMENT,

SECRETARY'S RECORD BOOKS

LOOSE-LEAF FIRE RECORD BOOKS

SECRETARY'S BLANK FORMS

Write for Catalog No. 341

CAIRNS & BRO., Inc. - Allwood, Clifton, N. J.

SINCE 1836

Worthington, Minn.—Engen Lumber Co. yard, destroyed.
Goodman, Miss.—Whse. at Goodman Gin Co. destroyed.
Bowling Green, Mo.—Melby-Jean Garment Co. plt. damaged. Short circuit.
Cardwell, Mo.—Joe Rutherford cotton gin plt. destroyed.
Fulton, Mo.—Laine-Myers drug store, P. N. Hirsch dept. store and Scott's furniture store damaged.
Newark, N. J.—Essex Whse. Co. damaged.
Newark, N. J.—Store fixture and woodworking plt. of Kasimir Drygas damaged.
Red Bank, N. J.—Borough's sewage disposal plt. on Navesink River, damaged.
Central Nyack, N. Y.—Nyack Paper & Supply Co., adj. McMahon Beer Sales Co. and dwelling of Leroy Dougherty destroyed.
Jamestown, N. Y.—Frame salvage whse. destroyed.
Keeseville, N. Y.—Finishing plt. of radio factory near Ausable River destroyed.
Syracuse, N. Y.—Hall owned by Syracuse Turners, Inc., a German-American organization, destroyed.
Syracuse, N. Y.—Nichols Brothers Heat Treatment Co. plt. destroyed.
Utica, N. Y.—Utica Structural Steel Corp. plt. destroyed.
Aberdeen, N. C.—Aberdeen Lumber Co. planing mill destroyed.
Carthage, N. C.—Smothers Brothers No. 2 whse. destroyed.
Davidson, N. C.—Cotton seed storage whse. of Southern Cotton Oil Co. plt. destroyed.
Akron, Ohio—Crude rubber stockpiled at General Tire & Rubber Co. plt., destroyed. Spark from welder's torch.
Akron, Ohio—Warner's Boathouse, two dwellings, two fire trucks and five automobiles in Portage Lakes district, destroyed.
Ashland, Ohio—Founders Hall on campus of Ashland College destroyed.
Bryan, Ohio—Buckeye Elevator Co.'s grain elevator destroyed.
Laura, Ohio—W. C. Mote Elevator, storage bldg., office bldg. and New York Central Railroad depot destroyed.
Leesburg, Ohio—Grain elevator owned by Babb Bros. Co. destroyed.
Summitville, Ohio—Summitville Face Brick Co. tile plt. damaged. Overheated gas-fired tunnel kiln.
Tiffin, Ohio—Kansas Co-Operative Elevator Co. grain elevator, destroyed.
Toledo, Ohio—Whse. owned by A. B. Caple Co. at Toledo Terminal Railroad, destroyed.
Sasakwa, Okla.—McCain grocery, Withers Dry Goods store, Sasakwa theatre, U.S Post Office, confectionery and vacant business bldg. destroyed.
Albany, Ore.—Zirconium plt. of Federal Bureau of Mines, damaged. Dust collected in sand blasting machine.
Ballston, Ore.—Farm home of James Aaron and seed whse. of Elliott Hay, destroyed. Grass fire.
Portland, Ore.—Oregon Transfer Co. garage damaged.
St. Helens, Ore.—I. O. O. F. Hall, O'Connors Market and Orcadia Hotel, damaged.
Willamina, Ore.—Stone Lumber Co. destroyed.
Du Bois, Pa.—Packard automobile agency destroyed.
East Pittsburgh, Pa.—Apt. bldgs. at 714 and 716 Linden Av., destroyed.
Harrisburgh, Pa.—Morris Jewelry Store destroyed. Sparks from acetylene torch.
Hawley, Pa.—Borough Hall 500 block and four adj. bldgs. destroyed.
Cheraw, S. C.—Freight station, cotton platform, two box cars, two gondolas at Seaboard Air Line Railroad, destroyed.
Columbia, S. C.—Fifty-seven concession stands on midway at South Carolina State Fair, destroyed. Defective wiring.
Dacusville, S. C.—Cotton gin of N. B. Williams & Sons destroyed.
Woodruff, S. C.—Bldg. occupied by Rochbourg's Supermarket, destroyed.
Chattanooga, Tenn.—Bridge over Tennessee River damaged. Cigarette.
Clarksville, Tenn.—Franklin House, an hotel, destroyed. Oil heater.
Dover, Tenn.—Cumberland Hotel and five bldgs.
Knox City, Tenn.—Local frozen food locker plt., City Grocery and Market and Hoge Pharmacy, destroyed.
Midtown, Tenn.—R. A. Davis diner, near intersection of U. S. Highway 27-70, destroyed.
Nashville, Tenn.—Wade's Restaurant and beauty shop operated by Charlene Lawrence, destroyed
Dallas, Tex.—Mansion, Highland Park and West Dallas housetrailer destroyed.
Jacksonville, Tex.—Cherokee Feed Co. plt. damaged.
Kingsville, Tex.—Hangar at Naval Auxiliary Air Station destroyed.
Lubbock, Tex.—Service station and whse., sixty miles northwest, destroyed. Gasoline transport truck.
Rowlett, Tex.—Cotton whse. and seed storage house destroyed.
Waco, Tex.—Three bldgs. at Blackland Airport, occupied by Texas National Guard 220th Anti-

Aircraft Artillery Detachment, Waco Foundry Co. and Cotton Insect Control Division of Federal Bureau of Entomology, damaged.

Alexandria, Va.—Storage yard and shed of new housing construction development in 2800 block of Elmwood Drive in Burgundy Village, destroyed.

Bristol, Va.—Cafe and grocery store and filling station destroyed.

South Hill, Va.—Farmers' whse. destroyed. Gas stove explosion.

Winchester, Va.—Planing mill and lumber shed of Glaize Bros. Lumber Co. damaged.

Tacoma, Wash.—Lyons Apparel Shop and Home Furniture Co. damaged.

Chester, W. Va.—Eight barns at Waterford race track destroyed.

Point Pleasant, W. Va.—Register bldg. in downtown district, damaged.

Shawano, Wis.—Bldg., eight miles northeast, north shore of Shawano Lake, occupied by Shalgoco Country Club, destroyed.

Ryley, Alta.—Earl Grain Co. elevator destroyed.

Harrietsville, Ont.—General store, dwelling of W. A. Sandham, cold storage plt., feed store, barn and other small buildings, destroyed.

Sault Ste. Marie, Ont.—Bldg. of Dr. Alex Sinclair, housing Lake Superior Insurance Agencies, Midland Securities, Canada Life Insurance, office of Dr. Alex Sinclair, Jr., and four apts., destroyed.

Tilbury, Ont.—Grain elevator of St. Clair Grain & Feed Ltd. destroyed.

Toronto, Ont.—Beacon Basketware whse. and office, destroyed.

Montreal, Que.—Feed whse. of W. L. Hogg, destroyed. Spontaneous ignition.

World Wide Fire News

By Roi B. Woolley

Insurance Bomb Plot Suspected in Plant Blast

Investigators believe a mysterious explosion, which almost wrecked a twin-engine DC-3 airliner in flight from Mexico City to Oaxaca in September, was caused by a time bomb placed in the luggage compartment by a person who had taken out an insurance policy on one of the 17 passengers on board.

The blast blew out one side of the plane, injuring seven passengers, including two of nine Americans on board. The pilot, his instruments blown out, brought the plane down at the Santa Lucia military air base, 70 miles northeast of Mexico City.

Investigators, who were called in because of suspicious circumstances surrounding the flight, placed the plane under guard, and although withholding details, admitted the arrest of an unindentified person had been ordered. This person is said to have insured one of the passengers for a large sum of money. A passenger reportedly saw a man put two suitcases on the plane at Mexico City and then cancel a reservation at the last moment.

The suitcase containing the bomb, probers said, was fortunately near the outer skin of the plane so the great force of the explosion was outward. The blast tore the baggage compartment door from its frame and scattered metal debris over passengers. Gasoline, which was also spattered over the side of the plane, luckily failed to ignite.

* * *

Mexican Arms Plant Blast Kills 6

Six persons were killed and eight injured on Oct. 6 when a tremendous explosion in a Government munitions factory demolished a small laboratory not far from the official residence of President Miguel Aleman of Mexico.

Two of the victims were blown fifty yards through the walls of the laboratory into the street. Army rescue squads removed four more bodies and the eight living casualties from the debris.

Photographers were barred from the

. . . MEANS ANOTHER CALL FOR

Scott Air-Pak (TRADE MARK)

because fire in any unventilated area consumes the oxygen in the atmosphere and produces deadly, invisible gases. ONLY self-contained breathing equipment provides safety in such oxygen-deficient areas. SCOTT AIR-PAK supplies cool fresh air for breathing freedom and protects the eyes from irritating smoke. There's no fogging of lenses to restrict your work inside a burning building. SCOTT helps you fight fires faster . . . safer.

That's why thousands of Fire Departments are using SCOTT AIR-PAKS . . . You're safe when you're wearing a SCOTT.

Your Scott Distributor will gladly give you a FREE DEMONSTRATION.

WRITE TODAY
. . . for full details on Scott Air-Pak Safety Breathing Equipment in Bulletin 510.

Scott Air-Pak (above)—½ hour minimum duration at extreme exertion. Weight as worn 29½ lbs.

ESTABLISHED IN 1932 Scott FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
215 ERIE STREET LANCASTER, N. Y.
Canada: Safety Supply Co., Toronto — Branches in principal cities
Export: Southern Oxygen Co., 157 Chambers Street, New York 7, N. Y.

EVENLY MATCHED...

for purpose and quality

BADGE and CROWN, both are prized possessions, yet standards of value are measured in different ways. To the king his crown is a possession of untold value and historical significance. To you, your badge is without question a prized possession that reflects personal achievement for you. Your badge has a special meaning to you – it stands for honesty, authority, and devotion to duty.

If your badge is a BLACKINTON BADGE you realize true quality and you know that your badge is the finest. But if you are one of the few not wearing a BLACKINTON BADGE you've missed a lot in personal satisfaction. Ask to see BLACKINTON BADGES the next time your equipment supplier calls. He will gladly show you the true quality and outstanding appearance of BLACKINTON BADGES.

BLACKINTON BADGES sparkle with quality.

BLACKINTON
V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS.

Blackinton Police and Fire Badges are sold throughout the United States and Canada, exclusively through authorized equipment suppliers.

plant, which manufactures small arms ammunition.

* * *

Hot Off the News Ticker

The House of Representatives voted to keep the Forest Service's "Smoky Bear" free from taint of commercialism by passing a bill to prohibit any commercial use of the famed animal character which the Forest Service created for use in its drive to prevent forest fires. . . . Four children were killed and 22 other persons injured in the village of San Marco, near Foggia, Italy, when a woman threw a bomb on a bonfire during a religious celebration. . . . Fifty, a circus monkey that escaped in Oberhausen, Germany, drank a bottle of schnapps left near a cellar door as bait and was captured easily by firemen. . . . It is disclosed that an F-84 Thunderjet hit a power plant northwest of Pusan, Korea, then plowed through a hospital and set four homes on fire, killing fifteen persons and injuring twenty. . . . The Salisbury, Eng., Fire Brigade rushed to Salisbury's historic cathedral one night to check a report that smoke was pouring from its 404-foot spire. Firemen climbed almost 300 feet up the spire before they discovered the "black smoke" was nothing but a swarm of flying ants . . . The U. S. Army Transport General Maurice Rose limped into the Port of Bremerhaven last summer after a short-lived fire destroyed part of her engines at sea. Naval officers said the blaze could easily have caused disaster, praising the crew and the 1,600 troops and their dependents aboard at the time. . . . Lightning set fire to Belgrade's central telephone exchange and temporarily isolated the capital. . . . That fire in Tokyo which destroyed most of a fire extinguisher factory is reported due to the Reds. Fire extinguishers were said to have been tampered with by Communist factory hands. . . . At Vandalia, Ohio, a crowd of 2,000 persons watched as a pilot bellylanded his twin-engined plane safely after circling for four hours trying to shake loose a wedged landing gear. Police held back crowds which gathered to watch, as firemen were ordered to standby. . . . Four employees at the Martin Pool gasoline plant, at Andrews, Texas, were killed recently in an explosion of a tank from over-pressure. The plant processes casinghead gas from oil and recovered butane. . . . Fuel tanks of a B-36 exploded at the Consolidated Vultee Aircraft Corporation, touching off a fire that virtually destroyed the $3½ million plane. Nobody injured. A spark ignited fuel being taken from the tanks so the plane could be weighed. Workers removed other planes in the area as flames shot high into the air. Fire fighters were almost helpless. . . . Sailors of the U.S. destroyer Isherwood extinguished a fire on shore at Montego Bay, Kingston, Jamaica, while citizens cheered. Two buildings along waterfront caught fire and the gobs, using ship's appliances, doused the flames before they could spread. . . . In Tokyo fire damaged two wards of a U. S. Air Force Hospital but 219 patients, including 40 bedcases and two newborn babies, were removed without injury. Several airmen fighting the flames were overcome by smoke.

* * *

Firemen Play Part in British Train Disaster

British fire fighters played a prominent part in rescue operations following the triple train disaster at Harrow and

Waldstone on Oct. 8, last, in which 110 persons were killed and 151 injured.

The accident occurred at 8:20 A.M., when a commuter train from Watford, headed for London, was pulling away from the platform at Harrow. This station has eight tracks, separated by island platforms, which are in turn connected by an overhead footbridge.

The departing train was crowded with 600 passengers—many standing, because an earlier local had been cancelled. Suddenly the Night Scot from Perth, Scotland, running 95 minutes late and doing 55 miles an hour, tore into the rear of the local. Four coaches of the express and four of the local became a twisted mass of steel and splintered wood, strewn across the tracks.

At that moment a London-Liverpool express, bound north, running five minutes late, smashed into the wreckage. Its two engines overturned in a roar of escaping steam. Some of the coaches of the Liverpool express swept across the platform; others jacknifed and tore down the overpass. The pile of wreckage was 55 feet high.

Immediately all available rescue, fire and medical forces were summoned. These forces, aided by police and volunteers, tackled the difficult task of extricating victims. It was not until two days later that the last body was recovered, that of the driver of the express from Scotland. Before its removal, doctors attempted to establish, if possible, whether the driver (engineer) collapsed before the accident. It was not determined just why the train was on the local track.

Incipient fires were quickly controlled by firemen. First reports to this Journal suggest that the disaster, like others that have struck British railroads, demonstrated the lack of readily-available heavy-duty rescue equipment. Fire departments in England do not possess the same sort and amount of rescue equipment that is commonly used by the fire service of this country.

September Fire Losses

Estimated fire losses in the United States during September amounted to $58,949,000, it was reported by the National Board of Fire Underwriters.

According to Lewis A. Vincent, NBFU's general manager, this $58,949,000 loss represents an increase of 10.4 per cent over losses of $53,398,000 reported for September 1951, and an increase of 4.4 per cent over losses of $56,462,000 for last August (1952).

Losses for the first nine months of 1952 now total $581,739,000, an increase of 6.1 per cent over the first nine months of 1951, when they amounted to $548,475,000.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

Chicago Fireman Killed in Hotel Blaze

An arsonist is believed to have set a fire, or fires, in the Argyle Hotel, Chicago, on October 25 that resulted in the death of a fireman who was killed while fighting the unexplained blaze, which routed 100 guests of the hotel.

The fires broke out simultaneously at opposite ends of the second floor. A 29-year-old cook was held for questioning.

One glance tells you just how the Randolph operates—no instructions, no explanations necessary! That's why *anybody* can get a Randolph into action fast! No valves to turn, no nozzles to adjust; just point and press your thumb and Randolph's cloud of snowy CO_2 kills fire instantly!

Non-damaging Randolph CO_2 evaporates without a trace, is non-toxic, won't conduct electricity, deteriorate or freeze. And *all* Randolph Models are Underwriters' Approved.

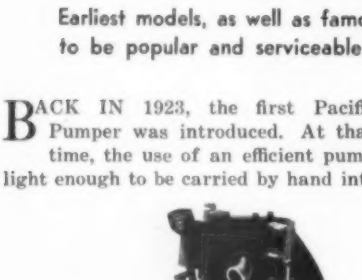
A COMPLETE LINE OF EXTINGUISHERS AND AUTOMATIC SYSTEMS

Learn how Randolph gives your plant panic-proof, split-second protection against flammable liquid, electrical and other hard-to-handle fires! Write Randolph Laboratories, Inc., 19 E. Kinzie St., Chicago 11, Illinois.

Pacific Pumpers Built 30 Years Ago Still Giving Good Service

Earliest models, as well as famous Type Y Pacific Pumpers continue to be popular and serviceable many years after introduction . . .

BACK IN 1923, the first Pacific Pumper was introduced. At that time, the use of an efficient pump light enough to be carried by hand into



TYPE Z

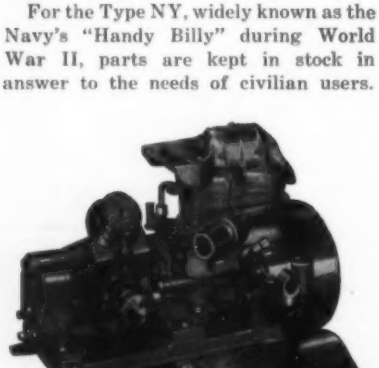
rugged terrain yet powerful enough to deliver an effective flow of water for combating forest blazes was a startling innovation. Many of the early Pacific Pumpers are still in service and are still the standby of fire fighters . . . mute testimony to the dependability and stamina built into all Pacific Pumpers, from the first model to those of the present. Such a record could be achieved only because Pacific Pumper continues to supply parts for even the earliest models, including the old-time Type Z shown above.

Then came the most powerful unit

TYPE Y

ever built for its weight and size, the famous Type Y Pacific Pumper. Embodying the improvements made possible by years of engineering research and thousands of practical field tests, the Type Y Pumper quickly won the approval of fire fighters and fire fighting authorities. Still available and still the favorite of many of the nation's experienced fire fighters, the Type Y Pacific Pumper was designed for the hardest forest fire control work . . . and has also been found ideal for fire protection in communities, resorts, on estates; for protecting right of ways, bridges, trestles, snow sheds and other types of property.

For the Type NY, widely known as the Navy's "Handy Billy" during World War II, parts are kept in stock in answer to the needs of civilian users.



MODEL 5-A

During the post-war years, the new models of Pacific Pumper have become even lighter, more compact and durable, and more versatile for a variety of purposes. At the request of fire fighters for an efficient unit for air transport, the Pacific Pumper, Model 5-A, was introduced. Weighing only 38 pounds, Model 5-A embodies maximum portability on foot, by truck or by air. Proved in use by public and private forest fire protection agencies, Model 5-A offers the choice of two pumps for volume up to 32 g.p.m. or for pressure up to 275 p.s.i.

Write for illustrations and data on the complete line of Pacific Pumpers, hose and accessories.

PACIFIC MARINE SUPPLY CO.
SEATTLE 1, WASHINGTON

FIRE EQUIPMENT DIVISION

Among the Buffs

By Paul C. Ditzel

MANY fire buffs—myself, not excepted—have wished they had the skill and the blueprints for constructing model fire apparatus for those shelves in the den.

Now comes Captain Thomas Showers, of the Los Angeles County Fire Department, whose artistic ability has resulted in the answer. Tom's ozalid prints, blueline on white paper, contain all the data for constructing models of historical and modern fire equipment.

Tom is like the postman on his day off. Only Tom spends his spare time building scale models of fire apparatus. His models are among the best I've ever seen and he's been showing them on Los Angeles area television stations. Sure, the stations throw in a leggy blonde model to help get the point across, but Tom's models still draw more stares. At least the television studio publicity men say they do.

Tom's plans are true scale and drawn after much research. He also supplies photos with almost all his plans now available. So far these plans are available:

One print including three different tractors for steamers and aerials; 1908 Seagrave buckboard type chemical; 1913 Seagrave-Gorham; 1920 "Mack Bulldog" high pressure; 1905 Gorter water tower; 1937 Ward-LaFrance battery wagon; 1922 LaFrance pumper; 1915 Robinson pumper; 1933 Seagrave pumper; 1951 Seagrave aerial; 1952 Mack pumper and manifold similar to Los Angeles'; and a 1952 International pumper.

Tom says $1.00 sent to his home, 4144 Lynd Ave., Arcadia, Calif., will bring postpaid any one of the above plans. His prints have all the major dimensions on them so they may be easily redrawn to different scales. Some of his plans are ⅜ inch scale and others one-half inch scale.

With one of Tom's plans and materials available at any good model store, even guys like me can build models. Pass me my Scout Knife, mama!

Another visitor during the past month was Milton Bracht of Dayton, Ohio. Milton was in the city on business but found time to plan a visit to Engine 3—one of the city's four Manifold Duplex rigs. Engine 3 is located at Fire Headquarters downtown, 217 South Hill Street, and well worth a visit.

News from Buffalo, N. Y., includes a series of articles in the Buffalo *Courier-Express* by Manuel Bernstein, with whom I used to work when I covered police for his opposition paper. Manny's series tells of the Buffalo Fire Department's operations and its modernization plan.

From Chicago, where things begin to pick up about this time of year, comes word that Bob Freeman and his pal, Jimmy Evans are photographing the entire Chicago Fire Department.

"Have now completed a correspondence with 19 fans all over the U.S. Sure is a fine way to get up to date on other cities, don't you think?" says Bob. Any Buffs wishing to write Bob should address their letters to his quarters: 3641 N. Olcott, Chicago, 34.

Bob writes he failed to respond when

the Chicago police radio dispatcher broadcast a "Second alarm fire, 121 E. 36th St." He learned later from Jimmy that a 3-11 actually was pulled. My Chicago experience was that police radio dispatchers occasionally got their 2-11's mixed up with their 3-11's. Ah, Chicago, may it never change!

My contemporary in London, Mr. Geoffrey F. D. Pratt of Fire Protection and Accident Review Magazine, sends data on London's fireboats. I haven't admitted it too openly before, perhaps, but my weakness is fireboats and the marine fire service. Any buffs who feel the same? I'd be glad to exchange information on fireboats. While I'm not much as a photographer, I'd sure appreciate any photos of fireboats in your cities.

Geoff's magazine also come up with an item from Spain. A visiting fireman remarked to a member of the Barcelona Brigade that there wasn't much spit and polish among the Barcelona Boys.

"Water still comes out of the branch whether it shines or not," said the Fireman.

Main activities of the Barcelona firemen while on duty, says this correspondent, are drills and gymnastics. Very little cleaning is done. Barcelona has two fairly new American type pumpers, two "rather ancient" Magirus turntable ladders (hook and ladders to us Yankees) and various other old machines which are pressed into service when the need arises.

Here's their interesting procedure of response:

"Two men are on duty at a time, and a system of route cards is used; these cards are about 10 inches by 6 inches with a map from the fire station to the street required, with a red line running through the route; on the reverse side the card carries a plan of the streets, houses, etc., in the immediate vicinity of the address, done in color and in great detail, showing hydrants, sizes of the mains, numbers of houses and shops, and so forth."

When I visited Copenhagen, Denmark, I found a similar route card plan in effect. Paris, France, also has a variation on this system, I found.

That's it again for another month. I have resigned from the Associated Press. I'll hope to continue this monthly column and you buffs (and Fred Shepperd willing) I'll see you here again next month. My home address remains the same: 2242 Princeton Avenue, Los Angeles 26, Calif.

New York Museum Features Historic Fire Station

The Museum of the City of New York, Fifth Ave. at 103-104 Streets, Manhattan, opened a special exhibition on Oct. 28, last, featuring "New York Street Scenes 1852," a high point of which was the facsimile of a firehouse as it was a century ago.

In those days, the Americus Six Company firemen were lodged in a brownstone house on Henry Street, near Gouverneur Street, considered the most sumptuously furnished and equipped in the city. The building included even a comfortable barrack-style bedroom above the main floor, an innovation in those days when volunteer firemen had their own occupations and residences in the neighborhood.

Shown in the Museum's display, the

Join the Parade to
INDIAN
FIRE PUMPS
and step out ahead in your fire prevention program!
INDIAN FIRE PUMPS use only clear water — no chemicals. Carrying straps are adjustable so that 5 gal. tank fits the back. It is air-conditioned so that no dampness touches the back.
Now is the time to be sure that you have an ample supply of INDIAN FIRE PUMPS to take care of any fire emergency that may arise. INDIANS are first choice of fire depts., forest rangers, lumbermen, etc. Don't take chances with fire — be prepared with INDIAN FIRE PUMPS.
INDIAN
Have You Ordered INDIAN FIRE PUMPS for CIVIL DEFENSE?
D. B. SMITH & CO.
406 MAIN ST.
UTICA 2, N. Y.
PACIFIC COAST BRANCHES:
Hercules Equipment & Rubber Company, Inc. 435 Brannan Street San Francisco 7, California
Fred E. Barnett Company 2005 S. E. 8th Ave. Portland, Oregon
Titan Chain Saws, Inc. 2700 Fourth Avenue South Seattle, Washington
Roy G. Davis Company 607 East Third Street Los Angeles, California
Fred E. Barnett Company 600 Spring Street Klamath Falls, Oregon
L. N. Curtis & Sons 426 W. Third Street South Salt Lake City, Utah
CANADIAN AGENTS:
Fleck Brothers, Limited 110 Alexander Street Vancouver, B. C., Canada
C. E. Hickey & Sons, Ltd. Hamilton, Canada

AT THE HEAD OF YOUR LINE . . .

you need a good LEADER . . . .

HART SHUT-OFF NOZZLE THREADED TO SUIT

A leader in more ways than one. It has a long and time-honored reputation for long, dependable, rugged service.

NEW YORK FIRE DEPT. STYLE SHUT-OFF NOZZLE WITH PLAIN TIP

Can also be supplied with stacked tip.

This dependable Shut-Off Leader comes in the 2½" size. It is built to stand up and function perfectly under the most rugged treatment. The Fire Service has learned to depend on this nozzle for more than 50 years.

SACHEM LEADER LINE SHUT-OFF NOZZLE

Comes in 1½" size for hose connections. Tip end of nozzle with booster thread for connecting booster hose for clean-up. The Sachem Leader line shut-off nozzle has earned an enviable record. It is truly a leader. It is one shut-off nozzle you can order and be assured you are getting your money's worth.

Investigate Powhatan's famous line of Brass Fire Fighting Equipment.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

LEONARD ROTARY GEAR PUMP

A NEW AND BETTER FIRE APPARATUS PUMP!

OUR best buy because of longer service life . . . lowest cost per year. Shafts mounted on Timken Bearings eliminate wear, suction and pressure loss. Delivers 150 GPM at 150 lbs. Designed to take hard fire service. It's "the pump you can't wear out."

DEALERS WANTED

Write for Folder

National Distributor
AMERICAN FIRE EQUIPMENT CO.
717 BOYLSTON ST., BOSTON 16, MASS.

firehouse contains the famous Americus Engine No. 6, which, because of its unusual size and weight (it was a double-decker, 15 feet long, 6 feet wide, weighing 4,200 pounds), was popularly known as "Big Six."

This engine covered three times more floor space than the first fire engines of 1733, according to the Museum, which were housed in narrow sheds back of the English City Hall. It required 16 men to operate its hand-pumper type engine, and in its time it was considered the heaviest, most powerful and most efficient engine ever constructed in this country. It was built by James Smith of New York in 1851 for the Americus Six Company which was organized December 11, 1848. On its front, Joseph H. Johnson, noted artist and charter member of Americus Six, painted the tiger's head which has since been adopted as the emblem of Tammany Hall. "Big Six" saw active service from 1851 to 1861, fighting many of the famous fires of the city. It was donated to the Museum by the Veteran Firemen's Association of Astoria.

In addition to the historic engine, the firehouse displayed contains actual furniture and equipment used by firemen of the day. Prominent in the background is the work bench with authentic tools, such as couplers, spanners and wrenches. In one corner at the rear, above a duty desk and chair, is a roster box containing the names of firemen who actually served their company in bygone days.

On the wall is a series of graduated nozzles, ready to be taken to a fire. To one side are the torches which were carried in front of the engine in order to light the way of the company as they pulled "Big Six" through the streets by manpower. Resting underneath the engine in the exhibit, is a former company mascot, a dog of the type which it is said was sometimes trained to carry a hand-lantern in his jaws and help guide the engine on its way.

Outside the firehouse is a big metal ring used as a fire alarm in that period. When struck with a heavy object, it made a resounding noise. Two fire hydrants used in Manhattan about that time, gift to the Museum of the Brooklyn Volunteer Firemen's Association, stand in the streets of the exhibit.

New York Firemen Honor Dead

Two thousand members of the New York Fire Department paid tribute to six of their colleagues and a Fire Patrol member, who died in line of duty in the last year, and 51 who died of natural causes.

Fire Commissioner Jacob Grumet extolled the dead as heroes who merited the everlasting gratitude of the city. Deputy Mayor Charles Horowitz, representing Mayor Impellitteri, also paid eloquent tribute to their deeds.

The annual memorial service was also attended by many retired fire fighters, and relatives of firemen, as well as some 300 persons who gathered in Riverside Park, before the Firemen's Memorial at 100th street.

Those who were honored were: John M. J. McGowan, Chief of the 11th Batt.; Capt. William J. Brady, Eng. 35; Firemen Thomas W. Cokeley, 18th Batt.; Dennis J. Corridan, Eng. 324; Bernard E. Meaney, Eng. 276; and Frank E. Wolf, Lad. 8, and Fire Patrolman William Bohlman, Patrol 6.

Persons in the News

Morgan Chief at Scranton

The new Chief of the Scranton, Pa., Fire Department is William L. Morgan, 38, appointed September 17 last to replace Thomas G. Evans, who left the department on Sept. 4.

The new Chief entered the department in 1938 as a private. For the past six years he has been driver for the assistant chief. He has an impressive military record.

At the same time of Chief Margan's appointment, Mayor Hanlon named Battalion Chief Martin A. Lahey, 57-year-old veteran of 30 years in the Bureau of Fire, to the post of Assistant Fire Chief. The latter was appointed in 1922, named lieutenant in 1937 and battalion chief a year later. He has been Acting Assistant Chief for over two years.

Frank Everett New Rochester, Minn., Chief

The newly-appointed head of the Rochester, Minn., Fire Department is Frank W. Everett, 52, who has held every position in the department in his 18 years of service.

The new Chief joined the department in 1934, as fireman. In turn he was a driver, captain, assistant chief and, when Chief C. E. Ginther resigned in December, 1951, he was named as acting chief.

The new head of the organization has already advocated a number of improvements for the department.

John Hill Heads Sioux City Department

John M. Hill, 42, was named August 1 as head of the Sioux City Fire Department, succeeding the late Chief Charles B. Kuhl, who died July 15 last.

The new Chief served as assistant chief for more than a year. He entered the department in Feb. 1938; was appointed lieutenant in June 1948, and captain less than a year later. In June 1951 he was named assistant chief.

Robert R. Miller takes over Hill's post as assistant chief.

Decker Chief at Lansing, Mich.

Charles H. Decker, formerly Assistant Chief of the Lansing, Mich., Fire Department, has been named to head that organization, following the retirement of Chief Hugh F. Fisher. Fire Marshal Ernest O. Kopietz has been advanced to the Assistant Chief's job.

Chief Decker, who became Acting Chief Oct. 1 and took full command on Nov. 1, is a veteran of thirty-five years in the department. He joined the Department in 1917 and advanced through the ranks to the new top post. His first promotion, to engineer, came in 1920. He was advanced to lieutenant in 1931, elevated to captain in 1937, and second assistant chief in 1945. In 1946 he was named first assistant.

Assistant Chief Kopietz joined the department in 1936 and served in the Fire Division until the Fire Marshal's Division was created in 1941, and he was named assistant Fire Marshal. He became Fire Marshal in 1946. He has a background of special training in arson investigation and fire prevention work.

Firemen Like

"SUPERFLAT"

EZ-FOLDING FIRE HOSE

WHY buy old style FIRE HOSE...when up-to-date patented "SUPERFLAT" EZ-FOLDING FIRE HOSE can be bought for an Equal or Lower price?

SUPERFLAT is the only fire hose in the world with hinge-like folding cotton jackets.

- Prices and samples will be mailed upon request.
- Agents also wanted—Write for territory desired.

Fire Hose Manufacturing Plants

PATERSON, NEW JERSEY • TRENTON, NEW JERSEY

THE GENERAL FIRE HOSE CO.
2272 East Jefferson
Detroit, Michigan

THE GENERAL PACIFIC CORP.
1501 E. Washington Blvd.
Los Angeles, Calif.

BRANCHES: New York • Chicago • Dallas • Atlanta • San Francisco

Financial Rating A.A.A.-1

Build your own fire truck for a few hundred dollars

The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 125 lbs. pressure is the fastest and most important phase of fire fighting.

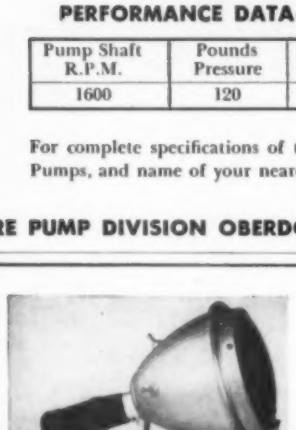
Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.

PERFORMANCE DATA—No. 26 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	150

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse N.Y.



RAY-LINE

NEW 3-WAY PORTABLE SEARCHLIGHT—FLOODLIGHT AND FLASHING RED WARNING LIGHT

As a warning light, the powerful **RED RAY** really stops traffic. . . . A positive safety measure that protects crews and apparatus either day or night.

Write Dept. No. 27 for catalog

THE PORTABLE LIGHT CO., Inc.
216 William Street New York 38, N. Y.

Collins Chief at Texas City

Selected to fill the newly-created position of Fire Chief in Texas City is Jim Collins, president of the Gulf Firemen's Association and former fire chief at Highlands, Texas.

Collins is first to hold the post which the city commission created two months ago upon the resignation of Fire Chief Fred Dowdy. The council combined the chief's and fire marshal's jobs into a full-time post. Fire Marshal W. T. Null, now filling the old part-time marshal's post, yielded his duties to Collins, as did Acting Fire Chief Joe Clement, on August 15 last.

Wheatland Twp. Chief Resigns

S. E. Fountain, Chief of the Wheatland Twp. Fire Department of the Village of Remus, Mich., has resigned his post after 30 years' service.

The department was organized in 1922 with Fountain as Chief, the complete equipment then consisting of a wagon and a dozen or so pails and three ladders.

Early in the 30's, Chief Fountain and others canvassed the village and received donations with which they purchased a second-hand chemical tank, mounted on a two-wheel hand cart.

Following a disastrous fire in 1926, which took three lives, agitation for better fire protection resulted in the addition of a modern fire truck. Ten years later the village took over the task of providing township fire protection and a fire station was erected. This fall a new modern piece of fire apparatus was acquired to bring greater happiness to the department.

The only thing presently lacking is a source of water supply.

Ross Leaves Training Committee; Fetters New Chairman

Announcement is made of the resignation of Chairman W. A. Ross from the Committee on Firemen's Training of the National Fire Protection Association, to accept a new position unrelated to the fire service, with the U. S. Office of Education.

W. "Art" Ross for years has sparkplugged progressive activities of the Committee on Firemen's Training, his activities winning for him an army of friends who will regret his departure.

Chief Joseph I. Fetters, Administrative Assistant, Adult Education and Extension Service, University of Missouri, at Columbia, Mo., who is likewise widely known to the fire service, has agreed to accept the Chairmanship of the Committee. Members having suggestions to bring before the Training Committee may write to the new Chairman, or to Committee Secretary Emmett T. Cox, Western Actuarial Bureau, 222 West Adams Street, Chicago, Ill.

McDaniel Heads Kentucky Chiefs

Earl R. McDaniels, Chief of the Lexington, Ky., Fire Department, was elected president of the Kentucky Firemen's Association on Sept. 11, last, at the close of the group's three-day convention in Ashland, Ky. He succeeds C. B. McCullough, Morehead, Fire Chief.

Other officers elected were: Russell Francis, Glasgow, vice-president; Lt. H. G. Bogenschultz, Covington, re-elected

secretary; and Richard Bogaud, Elizabethtown, treasurer.

The Association will hold its 1953 convention in Owensboro.

The retiring president, McCullough, received gifts from the Association and the Ashland Fire Department.

Speakers at the closing session included Capt. V. A. Beam, Louisville, of the Division of Vocational Education, State Department of Education and Captain J. E. Berryman, Lexington Fire Department. The latter discussed the firemen's training program, and Beam traced the history of the K.F.A.

At the evening session the day before, John L. Thompson, Louisville, assistant manager Kentucky Inspection Bureau, was presented a gold life-membership pin by the Association. He previously addressed the group on the subject of "Fires on the Highway."

Calif. Firemen Elect Officers

D. E. Littleton of San Bernardino, Calif., was elected president of the California State Fireman's Association at the organization's 30th annual convention held in Fresno, Calif.

Other new officers include: Harold Payton of San Anselmo, Northern vice-president; Robert Greely of San Mateo, Central vice-president; Paul Chase of Long Beach, Southern vice-president; and E. L. Albrecht Sr. of Long Beach, secretary-treasurer.

PAUL C. DITZEL

Greenfield Heads Jersey Chiefs

Ex-Chief Charles Greenfield of Kearny, N. J., was elected president of the New Jersey Fire Chiefs' Association, Oct. 18, at a quarterly meeting of the organization in Plainfield, N. J.

Other officers named were: Vice president, Chief Arthur Bilby of Montclair; secretary, Charles Dougal of Livingston, and treasurer, George L. Mitchell of East Orange. William Frodsham of Hackensack was elected trustee for three years.

Speakers at the meeting were Deputy Chief Degan of Elizabeth, Charles Weller, deputy chairman of State Civil Defense, and William J. Carr, Mack Manufacturing Company representative.

Obituaries

Boaz, Pioneer Fire Chief, Dies

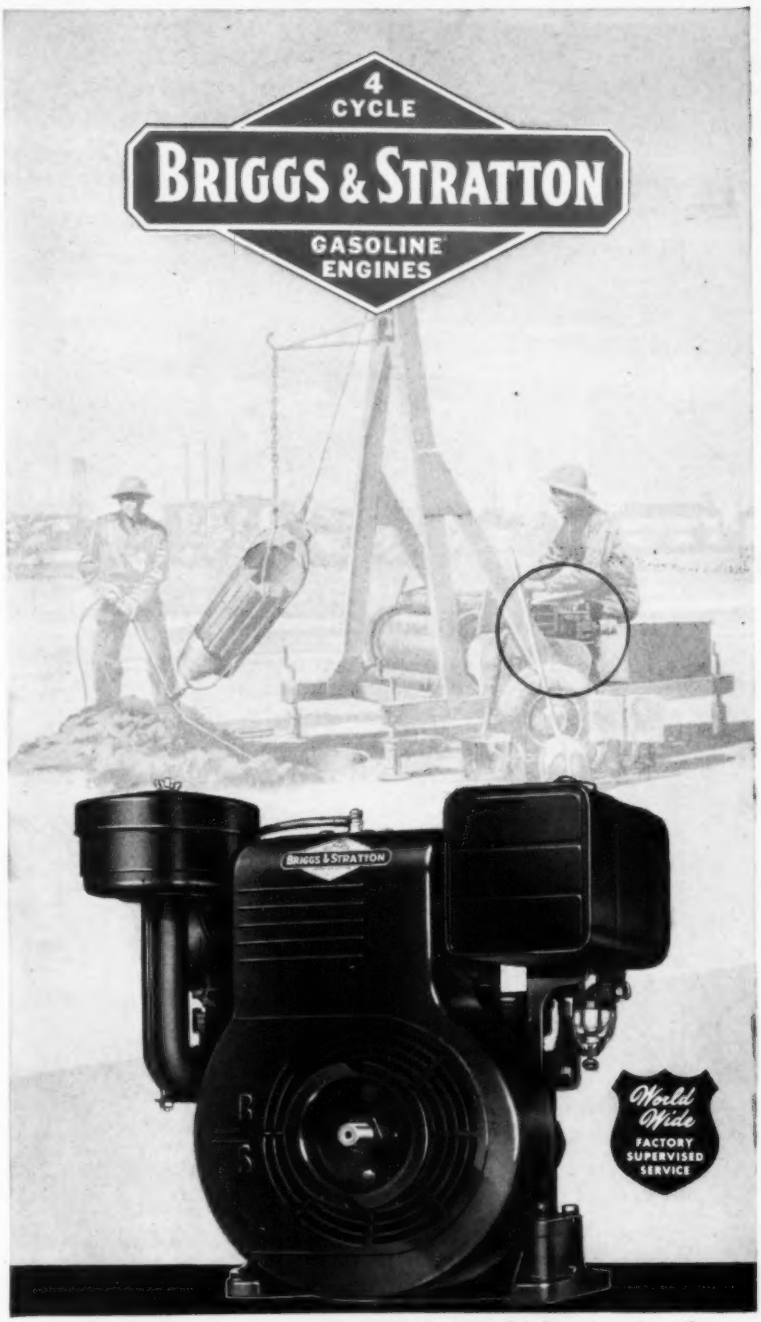
S. C. Boaz, 86, first chief of Henryetta, Okla., died Aug. 20, 1952, after an extended illness. He aided in forming the first fire force of the city in 1914 and shortly after was made chief. He retired from that post in 1935, after 21 years service, and for some years served as instructor for the Oklahoma A. & M. college extension department.

Texarkana Chief Dies

Fire Chief C. E. (Red) West, 44 Texarkana, Tex., fire fighter for more than 25 years, died in September following a six months illness.

He joined the department in 1924 as an extra man. During his career he worked at every station on the Texas side, and some on the Arkansas side, as the two fire departments were then operated jointly.

From about 1933 he served as captain



Preferred power on sewer cleaning machines and related equipment — the world's most widely used single-cylinder gasoline engines on machines, tools, appliances used by municipalities, industry, construction, railroads, oil fields, and on equipment for farms and farm homes.

YEARS ahead in design, performance, value — Briggs & Stratton single-cylinder, 4-cycle, air-cooled gasoline engines are *preferred* whenever dependable air-cooled power is required. Briggs & Stratton Corporation, Milwaukee 1, Wisconsin, U.S.A.

In the automotive field Briggs & Stratton is the recognized leader and world's largest producer of locks, keys and related equipment.

AIR PORT FIRE FIGHTERS SPECIFY BAR-WAY COUPLINGS

For booster and high pressure fog lines

There are four good reasons why the fire fighters specify BAR-WAY couplings. Four reasons why BAR-WAY couplings are growing in favour with firemen, hydraulic engineers and others who insist on the best.

→ **SAFETY**—The coupling becomes the *strongest part of the hose line.* Tested to 3000 pounds pressure and 500 pounds pull.

→ **FULL FLOW**—No suppression of flow in coupling. No shrinkage of hose at coupling.

→ **FLEXIBILITY**—Reels smoother. Easily replaced. Nothing to catch on corners or underbrush.

→ **BETTER MADE**—Accurately machined, always the same, interchangeable. WILL NOT FAIL.

Send for our free pamphlet. Gives detailed specifications for all types of pressure hose.

BAR-WAY MFG. CO.
STAMFORD, CONN.

WEST COAST REPRESENTATIVE } W. D. RIGDON, 383 Brannan Street, San Francisco 7, Calif.

HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary and Piston Pumps Supplied
HOWE FIRE APPARATUS CO., 1402 W. 22nd St., Anderson, Indiana

and in April, 1951, he was made chief, succeeding Joe Benjamin.

Parsons Honors Deceased Chief

The Chief of the Parsons, Kansas, Fire Department, Earl G. Parsons, who died early in October, was honored by his fellow fire men in a Resolution extolling his service and expressing sympathy over his passing to his family and to the citizens of the community.

Questions and Answers

Combination of Lines

To the Editor:

The following is a problem taken from "Fire Service Hydraulics," Example 131:

"Two engines, each at 280 pounds pressure, are each pumping through two parallel 1,000-foot lines of 2½-inch rubber lined hose; each pair of parallel lines is siamesed into a 500-foot line of 3-inch hose; the two 500-foot lines of 3-inch hose are in turn siamesed into a single line of 3½-inch hose 300 feet in length, and a 1¾-inch nozzle is used.

"What is the nozzle pressure?"

"The procedure is as follows:

"First combine each pair of parallel 1,000-ft. lines into a single line of 2½-inch hose; change the 3-inch hose to 2½-inch; then combine the two parallel 2½-inch hose so found into a single line of 2½-inch hose; change the 3½-inch hose to 2½-inch.

"With the engine pressure, 280 pounds on a single line of 2½-inch hose equipped with a 1¾-inch nozzle, solve for nozzle pressure.

"1,000 ÷ 3.6 = 278 feet of 2½-inch hose, which is the equivalent of each pair of 1,000-ft. lines of hose fed by either pumper.

"Change each of the two 3-inch lines into a single line of 2½-inch hose.

"500 ÷ 2.6 = 192 feet of 2½-inch hose, which is the equivalent of 500 ft. of 3-inch hose.

"Adding the 2½-inch equivalent of the parallel 1,000-ft. lines to the equivalent of the 500 ft. of 3-inch hose we get:

"278 + 192 = 470 ft. of 2½-inch hose.

"In other words, the two parallel 1,000-ft. lines of 2½-inch hose and one 500-ft. of 3-inch hose are equivalent to a single 470 ft. line of 2½-inch hose.

"We thus have two parallel lines of 2½-inch hose of this length, 470 ft., siamesed into a 300-ft. length of 3½-inch hose.

"Next combine the two parallel 470-ft. lines into a single line and

change the 300 ft. of 3½-inch hose into 2½-inch hose; then add the lengths of single lines so secured.

"470 ÷ 3.6 = 130.6 ft. of 2½-inch hose.

"300 ÷ 5.8 = 51.7 ft. of 2½-inch hose.

"Then the entire layout is equivalent to a single line of 2½-inch hose 130.6 + 51.7 = 182.3 ft. in length.

"N. P. = E. P. ÷ (1.1 + KL)

"E. P. is 280 pounds.

"K, for 2½-inch hose and 1¾-inch nozzle, is .907.

"L = 182.3 ÷ 50 = 3.646

"Then N. P.

= 280 ÷ (1.1 + .907 x 3.646

= 280 ÷ (1.1 + 3.307

= 280 ÷ 4.407

= 63.5 pounds nozzle pressure"

L. R.

I have answered this problem by using the formula N. P. = E. P. ÷ (1.1 + KL). I tried answering it by just getting the factor for four 2½-inch lines and dividing that into the 1,000-foot line. Then I took the factor for two 3-inch lines and divided that into the 500 feet of 3-inch hose. I then took the factor for the 3½-inch line and divided it into the 300 feet of 3½-inch hose. After adding all the totals to give me a single line of 2½-inch hose, I get a length of 2½-inch hose slightly different than the answer in the problem.

Answer: Employing your method, the results are as follows:

1,000 ÷ 12.4 = 80.6
500 ÷ 9.35 = 53.5
300 ÷ 5.8 = 51.7

80.6 + 53.5 + 51.7 = 185.8 feet, as the length of a single line of 2½-inch hose equivalent from the standpoint of friction loss to the entire layout given in the oroblem.

In our solution we secured an equivalent length of 182.3 feet. The difference, which amounts to but little over 2 feet, is negligible. It is accounted for by the fact that the factors for changing different layouts to a single line of 2½-inch hose are approximate values, rather than exact values.

To use figures which would make both answers tally would necessitate carrying out the values of the factors several places rather than one or two places as indicated in the solution above.

Your method is just as good as that employed in "Fire Service Hydraulics," and in an examination should receive equal credit.

Use of Pump Regulators in Relay Layout

To the Editor:

The following question deals with using the water pressure regulator (or governor) with centrifugal pump-

ENGINEERED foam Fire Protection
NATIONAL
AER-O-FOAM
LIQUID
AER-O-FOAM LIQUIDS
OVERHEAD SPRAY DEFLECTORS
TYPE "HC" FOAM CHAMBERS
LINE PROPORTIONERS
PRESSURE PROPORTIONERS
National Foam Installations Assure Fast, Positive Action
Have you "fire checked" your plant lately? You may now have a greater flammable liquid fire risk than ever before. If gasoline, alcohols, acetone, or mixed polar solvents are stored and used in your plant, complete automatic foam protection should be provided.
Let National Foam engineers study your plant hazards, then recommend "Engineered Foam Fire Protection." If your problem involves technical research, National Foam chemists are well-equipped to develop an answer.
Based upon years of experience in helping leading industries with fire protection problems, National Foam specialists will recommend mechanical or chemical foams, and proper foam making devices to meet your specific requirements.
Consult your nearest National Foam Distributor, or write direct about your problem.
NATIONAL
FOAM SYSTEM, INC.
Headquarters for Foam Fire Protection
WEST CHESTER, PENNA.
NATIONAL FOAM SYSTEM
CONTINUOUS FOAM PRODUCTION

NEW IDEA

IN SALVAGE COVERS...

Acclaimed at the International Fire Chief Convention, this new type Salvage Cover developed by Canton Containers offers tremendous savings in cost and manpower.

LIGHT WEIGHT...

The new Salvage Cover weighs only *one-tenth* that of conventional tarps — under fire-fighting conditions, one man carries enough to protect over 4800 sq. feet of space.

LOW, LOW COST...

These 100% pure polyethylene film Salvage Covers cost only *one-third* that of conventional tarps . . . and are waterproof, tear-resistant, mildewproof and easily washed.

MANY USES...

Canton Containers' new Salvage Covers protect furniture and costly merchandise when fabric tarps are impractical. Get complete facts for your department on these new Salvage Covers now—no obligation, simply clip the coupon and mail—Today!

CANTON CONTAINERS

PLASTICS DIVISION
CONVERTERS OF PLASTIC FILMS

INCORPORATED
Ninth Street, S. E.
Canton 2, Ohio

GET FREE DETAILS TODAY

CANTON CONTAINERS, PLASTICS DIVISION
3000 Ninth Street, S. E., Canton 2, Ohio

Send me illustrated catalog and price list sheet on your new Salvage Covers.

Name .....
Title .....
Fire Department .....
City ..... Zone ..... State .....

'ers in the relay: Pumper A is stationed at point of suction. It is pumping through a stretch of 2½-inch hose to Pumper B; Pumper B is pumping through a stretch of 2½-inch hose to Pumper C; Pumper C is pumping through a line of 2½-inch hose, to which a nozzle is attached.

Assume the following:

Pumper A is drafting at a 10-foot lift and pumping at 200 pounds to Pumper B.

Pumper B receives water at 20 pounds on intake side and pumps at 200 pounds to C.

Pumper C receives at 20 pounds on intake side and pumps to nozzle at 50 pounds nozzle pressure.

Could the water pressure regulator be used in the above setup, or in any relay whether the source be from a draft or hydrant?

I understand that the water pressure regulator is actuated by the pressure in the pump housing. If this be so, then if the nozzle is shut down with the regulator set at 200 pounds, it should slow down the motor speed, but if the pumper supplying this pumper is pumping at 200 pounds, the pressure in the line would build up to where the pressure would be 200 pounds in the pumps, which should keep the regulator from slowing down the motor.

My opinion is that the regulator would operate only from the pumper at the source of supply. Is this correct?

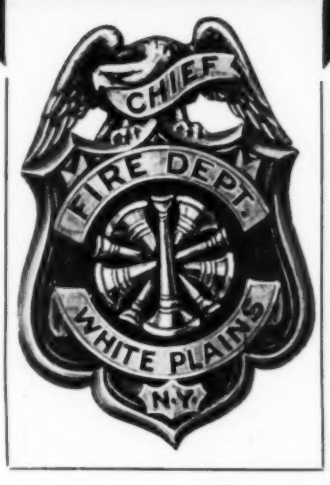
Another question: In the "Fire Service Hydraulics" many problems dealing with reducing 3-inch hose to an equivalent line of 2½-inch hose are encountered throughout the book. In each case the factor used to complete the conversion is 2.6. Why isn't 2.5 used?

J. T. O.

Answer: It would be necessary to employ water pressure regulators on all three of the pumpers in the line. If such regulators were not provided, any pump might "run away." The purpose of the regulator is to hold down the speed of a centrifugal pump in the event that its load is removed by shutting off a nozzle.

For example, suppose the regulator on Pumper B was inoperative. Suppose further that regulators, or governors at Pumpers A and C were set at 200 pounds. If the nozzle were closed, the flow of water would stop in the line and all pumps would have a tendency to speed up due to the sudden elimination of the load. But Pumpers A and C with regulators set at 200 pounds would not reach a speed appreciably above that necessary to create 200 pounds per square inch. Pumper B, on the other hand, with regulator inoperative, would speed up and in so doing would increase the pressure on the discharging side. This pressure would be transmitted (without friction loss) to Pumper C and

BRAXMAR
GREATEST NAME IN BADGES



Since 1879

Firemen the world over rely on Braxmar for the finest badges money can buy. We offer the widest possible selection in nickel, chrome plate, sterling silver, gold plate, rolled gold and solid gold; all of our badges and insignia are the work of experts with a lifetime of service.

Write for latest circular.

C. G. BRAXMAR CO., Inc.
JOHN O. VEIT, President — JOHN O. VEIT, JR., Secretary-Treasurer
216 E. 45th Street, New York 17, N. Y.

this pumper would also be subjected to the same excess pressure. While the motor on Pumper C would naturally slow down still further, the pressure delivered by Pumper B would still be imposed upon it.

Answering your second question relative to why the factor 2.6 is used instead of 2.5 in changing 3½-inch hose to 2½-inch, the following may be said:

When two hose lines of different diameter are compared, the comparison is made upon the basis of the friction loss in each for the same flow (and, of course, the same length of line).

For a flow of 240 gallons per minute, the friction loss in 2½-inch hose is 14.1 pounds per hundred feet. The friction loss in 3-inch hose is 5.4 pounds per hundred feet. $14.1 \div 5.4 = 2.61$.

Again, where the flow is 260 gallons per minute, the friction loss in 2½-inch hose is 16.4 pounds per hundred feet, and in 3-inch hose, 6.3 pounds per hundred feet.

$16.4 \div 6.3 = 2.6$.

Thus you see why 2.6 instead of 2.5 is used as a conversion factor for changing 3-inch hose to 2½-inch.

The Round Table

(*Continued from page* 948)

which have booster apparatus ready at our call. The Naval Ammunition Depot at Earle stands ready at all times to send large tank trucks of water to aid departments in this area, and have rendered very valuable service in many instances. We also have a list of farmers who have spraying tanks on trucks, which are often called into service for carrying water to these fires.

Our department is entirely volunteer, and has 110 members, divided into four companies.

This system of country coverage has worked out very well since its start, and now that we have equipped these trucks with two way radios, ready to summon additional aid when needed, much more satisfactory results are being attained.

Henry Hoebeke, Chief, Grand Haven, Mich.: We provide fire protection for our surrounding areas which includes Grand Haven Township.

The township has purchased two fire trucks which we have in our fire station at all times, and the titles are in our city's name. Our city has the first use of these trucks.

The township has its own volunteer firemen, 28 men, under my supervision. When an alarm comes in from the township one truck responds with a driver from our department, who acts as chief, and, in turn, the firemen in the township are notified by telephone from our department of the location of the fire. The second truck goes to the fire with a member from the township fire department.

We charge $10.00 an hour or fraction of an hour for the man responding with the first truck.

All gas and oil are furnished by our department.

We have a good supply of water in our territory, several bayous, Grand River and Lake Michigan.

Our department has full time, part time and volunteer firemen.

This system has worked out very satisfactorily.

Raymond Birch, Chief, Marshal, Mo.:

MONITORADIO

LOW COST MONITORS

pay off in

2-way radio

Members of the Barnard Fire Department which has outstanding record for efficient operation shown with Ed Masline of Masline Radio and Electronic Equipment Co., who handled installation of monitors.

POLICE
FIRE
REA
PIPELINES
MUNICIPAL
AIRCRAFT
FORESTRY

Use of additional listening posts will prove as effective as they have for Fire Chief Van Zile of Barnard, New York who writes:

"Speed in mobilizing a volunteer fire department determines the efficiency of that department. Today, thanks to radio and your PR 9 radio receivers, we are able to alert our entire personnel, informing them of the exact location of the alarm, and in most cases a number of firemen are at the scene, waiting for the apparatus.

"Our installation is very simple, consisting of a base station, three mobile units installed on the apparatus, and eighty PR 9 receivers located in the homes of the volunteers."

"The PR 9 receiver was selected for our department after several months of exhaustive testing of various makes, and I would highly recommend them to any department about to start on a similar program."

POLICALARM

MODEL PR 9 for 152-174 MC Band

RADIO APPARATUS CORP.

55 N. NEW JERSEY ST. • INDIANAPOLIS 4

PHONE: ATLANTIC 1624

...NE ADVERTISING

Here's a REAL

CRASH AXE

THE

ATLAS

THAT can be put to more uses in fire and police department rescue work than any other piece of equipment. Lives have been saved by using this axe to cut through auto bodies, plane fuselage and live wires.

It has a place in Chief's and Officer's cars—squad cars—airfield crash trucks. Belongs on every ship, commercial plane, railroad cars—in fact, everywhere that fast forcible entry or exit may become necessary. Every CIVILIAN DEFENSE group should be equipped with this emergency tool.

Made of forged steel, one piece, with fully insulated rubber covered handle (withstands 20,000 volts) which makes it valuable for cutting live wires. Beautifully and strongly made. The unique design of the cutting edge and pick makes it adaptable for quick cutting and ripping. Length 15¼ inches overall. Weight 2½ pounds. Comes with protective leather shield. Shield slotted for attaching to belt.

Truly a most indispensable tool. Write for price and particulars to

ATLAS SAFETY EQUIPMENT CO. INC.

27 WARREN STREET, NEW YORK 7, N. Y.

QRS

Flameproof Chemicals

QRS DeLuxe for drapery material soft finish, dry cleanable.
QRS No. 8—Clear Xmas tree flameproofing does not change appearance of tree.
QRS No. 57—Flameproof paint for Xmas trees. Rubberized coating seals needles. Tree looks fresh after three months. Colors, white or green.
QRS No. 57—Flameproof paint for wood, for use outdoors or indoors.

Write for Catalog. Jobbers Wanted in Some Territory.

Q R S NEON CORPORATION
Chemical and Process Division
170 North Halstead Pasadena 8, California

At the present time the city council and a group of farmers of the county are trying to promote another fire truck to be used for country fires.

The plan is for the farmers to buy a truck and the city will keep it in repair and also man it. Of course, it will also be used in the city should the need ever arise.

We have five regular and five volunteer firemen in our department.

Wilber S. Crane, Chief, Little Falls, N. J.: Little Falls is surrounded by several other municipalities resulting in many borderline calls. Although a volunteer department, we maintain a 24-hour paid alarm operator.

The operator has authority to send one engine company and the rescue squad to any fire or emergency within a quarter mile of the township line, regardless of who sends the call.

Over the quarter mile line, the call must come from the police or fire department officials of the municipality requesting help.

There is no charge for this service, but rather a reciprocal policy.

We depend on water provided by the farms as well as that carried on the apparatus.

Vic May, Chief, Pacific Grove, Cal.: We provide fire protection to one grammar school just outside of city limits at a cost of $100.00 per year.

We have nine paid men and 25 volunteers.

Our system has worked very satisfactory for years.

L. W. Ronald, Chief, Trail, B. C.: This is a very touchy subject here. We have a small department of twelve paid men and eighteen volunteers. We used to answer all alarms to the outlying district but were directed by letter from Council not to respond to outside fires without their permission. That leaves us on the spot as we have to notify the mayor or chairman of the fire committee of the fire. They are very reluctant to say not to go because if life is lost in the fire, they do not wish to assume that responsibility. This causes considerable delay and has reduced the effectiveness of our assistance. Our absence from the city also reduces the protection of our taxpayers.

There has never been any charge made for this service. How could you conscientiously charge a person who has lost property by fire?

Hydrants and water mains are installed in our outlying districts.

E. V. Austermiller, Chief, Napoleon, Ohio: We cover the largest area in Ohio—eight full townships besides the City of Napoleon—with one of the lowest fire losses in the state. We contract with the township trustees of each township and receive $75.00 a run. While this doesn't cover costs, it does build good relations with all of our trading area.

We have two fire tankers plus a rescue unit and a large lighting unit which respond to all fires in rural areas. These units are equipped with two-way radio and portable pumping units as well as regular fire pumps.

Our department consists of three paid and fifteen volunteer men.

Frank Case, Chief, Miles City, Mont.: We provide fire protection to areas within three miles of the city limits.

We have contracts with Radio Station KRJF, the airport, the county rest home, sale yards, Fair Board, etc.

The rates are: A retainer fee of $50.00 per year, due on the date of the execution of the agreement; $25.00 for the first hour, $75.00 for the second hour, $100.00 for the third hour and every hour thereafter. The charges start when the apparatus leaves the station and until it returns.

We have no contracts for rural service. The rural fire department answers all rural calls if they have signed for fire protection. Their trucks carry 300 gallons of water. The farms have some water available.

The department consists of thirteen paid members who work three eight-hour shifts with one day off in eight.

Paul Taylor, Chief, Douglas, Ariz.: We make an effort to provide fire protection to the area immediately adjacent to the city limits. However, due to a limited amount of equipment, we keep it within a definite radius. Lack of either fire hydrants or available places for drafting water compel us to rely on a 300-gallon booster tank.

We occasionally, upon request, dispatch a pumper to our neighboring city, Agua Prieta, Sonora, Mexico, which joins us on the south just across the Border. Crossing formalities are waived in emergencies. This small Mexican town has no fire protection of any nature. The city receives no compensation for this, but feels that it pays off in better relations.

The responsibility of sending fire equipment out of town rests solely with the fire chief and is held to a bare minimum. The feeling prevails here that residents living within the corporate city limits have first call on fire protection. After all, they are the ones who pay the bill.

Maurice Johnson, Chief, Paris, Ill.: We do give fire protection to surrounding areas. No charges are made for this service since we voted on a fire protection district under my guidance. We operate a fire community truck out of the Paris station paid for by the district. We have the truck for city use, if needed, and the district pays the salaries of two firemen. We are a paid fire department. Everything is working satisfactorily at this time. We are in the second year of operation.

Some farms have water supply, but most rural homes depend on water carried on truck.

Fred W. Walker, Chief, McCook, Neb.: We do not provide fire protection to surrounding areas.

We are part paid and volunteer. We are going to add two more men to the paid department and try to get an increase in the number of volunteers. This will give us the manpower that we need. We are at the present time working on a rural truck and that will give us three trucks.

Why do the insurance companies preach mutual aid to the cities and then turn right around and say you can't make rural runs? To me, it sure doesn't make sense when the city is willing to help the farmer who is the backbone of any farming area. Yet the insurance companies say you can't go out of the city limits or they will raise the insurance rates.

A. H. Wygal, Chief, Pulaski, Va.: Our fire department provides protection for all of the county.

We make a charge of $50.00 for each run in the county and two dollars per man per hour.

CONVENIENCE IN OPERATION—
A 60-watt transmitter, receiver, power supply, and controls—in a single unit for desk-top operation. Available in 30-50 mc range, 152-174 mc range.

CONVENIENCE IN MAINTENANCE—
Chassis slides up for complete accessibility. Cabinet acts as handy, solid servicing rack. No need to remove chassis from cabinet.

NOW see what CONVENIENCE means with RCA's new 2-way radio station

CONVENIENT!
Compact, space-saving design
Complete base station in a single desk-top unit using less than 3½ square feet of desk space—saves valuable floor space.

CONVENIENT!
Up to 3 transmitter channels, 2 receiver channels
Designed for up to 3-channel transmission and 2-channel reception where required. Lights on front panel indicate frequency in use.

CONVENIENT!
Easy to install and service
Just plug in transmission line and AC power and you are ready to operate. Lift-out chassis for servicing in cabinet. Metering plugs for easy checking.

CONVENIENT!
Local or remote operation
Choice of local or remote control base station in single, compact cabinet. Chassis also available in standard cabinet rack or weatherproof, pole-mounting box.

For further details on the new RCA 60-watt desk station, MAIL COUPON NOW

Dept. 50-K, RCA Engineering Products,
Camden, New Jersey

( ) Please send me information on new Carfone desk station.

Also send me information on 2-Way Radio for:
( ) General Industry (Utilities, Construction, Petroleum, Lumber, Mining, etc.)
( ) Transportation (Trucks, Buses, Taxis) ( ) Public Safety (Police, Fire, Ranger)

Name_____

Title_____

Organization_____

Address_____

City_____ Zone_____ State_____

RCA **RADIO CORPORATION of AMERICA**
MOBILE COMMUNICATIONS CAMDEN, N.J.

The HALE TYPE "BL" Discharge Valve

. . . Available on All HALE Fire Pumps

Easy-turning at all pressures, the Hale Type BL Discharge Valve can be "gated" and locked into position by a slight turn of handle to prevent creeping. The water flow is through a perfectly round waterway for low flow resistance.

Many tests have proved the valve's reliability and freedom from service troubles.

The "BL" valve is not sensitive to dirty water and will hold high pressure or vacuum. Replacement parts are inexpensive, easy to install and do not have to be "ground in." Ample handle clearance and easy turning mean freedom from "knuckle busting."

The Hale Type BL Discharge Valve is typical of constant Hale improvements resulting from constant research.

For detailed information send for Bulletin No. 293 on the Hale BL Discharge Valve.

OUTSTANDING FEATURES

- Turns easily at all pressures.
- Will not leak at pressure or vacuum.
- Circular section through valve cuts flow loss.
- Not sensitive to dirty water.
- Easily serviced . . . no "grinding in."
- Slight twist of handle locks valve into any desired position for gating.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

Hale Fire Pumps Are Built in All Standard Capacities

ONAN Emergency Electric Plants for Civil Defense

No matter what happens to central station power during a bombing attack, electricity for essential defense needs is always available with Onan Electric Plants. Onan units, mounted on truck or trailer, or carried in the trunk of a car, can be rushed to any point where power and light are needed. Sturdy and dependable, Onan Electric Plants are an important link in a city's defense against disasters of any kind.

Write for folder

Power & Light for Every Need

Portable, Mobile, or Stationary
400 to 35,000 watts. A.C. or D.C. models.

Onan PRODUCTS

D. W. ONAN & SONS INC.
5708 UNIVERSITY AVE., MINNEAPOLIS, MINN.

The farm districts do not compensate us in any way except they occasionally give the volunteers a small donation.

The money paid to the city from the county and from the number of runs made in the county produces enough money to take care of all repair expenses in the city and county.

In a few of the places we have to depend on the supply of water which we carry, but the majority of the farmers have ample water such as ponds and spring branches.

Our fire department is semi-paid. We have three regular paid men and twenty-two volunteer men who are paid only when they attend a fire.

This system has worked out very satisfactorily to date, but if the county increases in population in the next two years as it has in the last two years, we will have to increase our equipment and establish departments in other sections.

Sidney F. Lawson, Montpelier, Vt.: Our department provides protection to the towns of Berlin, East Montpelier, Calais, Worcester, Middlesex and part of Moretown. We have mutual aid agreements with the village of Waterbury and the city of Barre.

Our charges are $66.00 for the first hour and $33.00 for each hour thereafter; $1.50 per man per hour, plus towing charges if any, and damage to firemen's clothing occuring at fire.

Our charges for services rendered are strictly with the town treasurer in the town where fire occurs.

In many instances water is available from nearby river or artificial pond where water can be pumped. In other instances water has been supplied for booster line use by farm trucks in milk cans.

Our department consists of fourteen full-time firemen and twenty-five paid callmen.

Our system seems to wokr out satisfactorily.

Stuart M. Potter, Chief, Greenwich, Conn.: The Greenwich Fire Department does not provide fire protection to surrounding areas except on a mutual aid basis, as all surrounding areas are under protection of some fire department. No charge is made for such mutual aid service. Greenwich benefits from this arrangement by receiving outside aid at no cost whenever needed. The Greenwich Fire Department is basically a volunteer department, having a paid chief, a paid deputy fire marshal and thirty-five paid drivers operating from seven stations.

Harold J. Morningstar, Chief, Company No. 2, Fort Erie, Ont.: We provide fire protection to Bertie Township which surrounds Fort Erie.

We do make a yearly standby charge of $1,500 and charge for equipment at the rate of $100.00 for the first hour and $50.00 per hour for each additional hour to be credited to standby charge; also $1.00 per hour for every man with equipment.

Seven miles of part of our area is along the Niagara River. In other areas we carry water or rely on wells and creeks.

Our department is all volunteer, having two fire chiefs.

Our system is working out satisfactorily.

Roy Laurie, Chief, Corry, Pa.: We do not guarantee protection, but try to

help out within our power. We answered fifteen rural alarms during 1951 and to October 13th of this year have answered ten.

We have never charged anyone except large corporations where we have to pump for long periods of time; then we ask for a sizeable donation.

We do receive the township share of the two per cent insurance tax from two townships payable to the Relief Association.

Where creeks or ponds were available, we could not get the townships to provide driveways or even a platform to hold pumper. Generally the only water is that carried in apparatus.

We are a volunteer department, with the exception of drivers.

We have done a great deal of good. We have had to just stand by a good many times.

Elmer R. Smith, Chief, Bedford, Ohio: Bedford Township owns two pieces of fire equipment, one of which is a 1,000-gallon tank with a 400-gallon pump mounted midship.

The City of Bedford has a contract with township trustees and city firemen operate township equipment at township fires and are paid by township. No charge is made to farm districts.

We have 1,000 gallons of water in our tank trunk and 200 gallons in a 500-gallon pumper. We get water from ponds and walls if needed, and pump into tank truck.

Our department is paid by the hour. Each call is considered an hour, even a false alarm.

The rural section is very well pleased with the service we give them.

Arnold G. Wessel, Chief, Merrill, Wis.: We have a contract with six townships. We charge $100.00 per call and $20.00 per hour after five hours.

We have had no trouble in collecting from other townships with which we do not have a contract.

In most cases we have to depend upon the water carried upon the apparatus, but we have had some cases where water was provided for our booster tank.

We have a full paid department.

Our system has been satisfactory up to the point of needing a new truck, which we are working on at the present time.

We also have a clause in our contract whereby the towns pay for any equipment which is lost or damaged.

Richard Romelfanger, Chief, Baraboo, Wis.: We provide fire protection for surrounding areas, but if it's out of our territory we charge $100.00 for two trucks, one with 200 gallons and the other with 800 gallons.

The two trucks are owned by three townships based on valuation of said townships. The service is free to property owners in townships. The townships pay $3.00 for the first hour and $.75 per hour after the first hour per man. We have two-way radio on one truck and in case of a bad fire or shortage of water on farm we call for private road contractor with tank truck with 3,000 gallons of water. These trucks are also for use in the City of Baraboo.

This system has worked out satisfactorily, our biggest problem being J. Q. Public who blocks our way.

To further clarify my statement on the ownership of trucks, when we buy hose or anything else for the trucks,

...speediest, longest-lasting alcohol resistant foam ever produced!

Here at last is a really effective extinguishing agent for use against fires in water soluble solvents . . . Pyrene* Alcohol Resistant Foam (patent pending). This brand-new compound produces far and away the most stable foam ever known. Its effective life can be measured in *hours and days* instead of mere minutes. The blanket it provides stays on long after there is any chance of flames breaking out again. Actually, Pyrene Alcohol Resistant Foam is more than its name implies. It is really an *all-purpose* foam—effective against all flammable liquid fires—gasoline, oils, paints, alcohols, ketones, esters and ether. For complete information, write Pyrene.

*T.M. Reg. U.S. Pat. Off.

Pyrene AIR FOAM

PYRENE MANUFACTURING COMPANY
594 Belmont Ave., Newark 8, New Jersey
Affiliated with C-O-Two Fire Equipment Co.

Make this a
Merry Christmas
for your men, Chief—see that they are provided with—

Here's Your Warmest Friend on a Cold, Wet, Run!

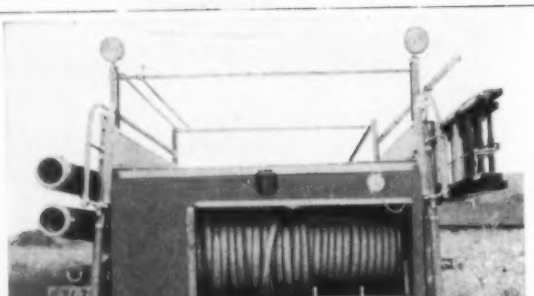
Fighting fires is a "he man's" job, especially so in winter. Long cold runs in wet clothing has put many a "he-man" to bed with a severe cold or worse. The one best assurance you have of keeping warm and dry is to slip into a GLOBE SUIT. Among many outstanding features are the New 100% DuPont Neoprene Interlinings. See your local dealer or write today for our latest catalog.

TRADE MARK

GLOBE MFG. CO.
PITTSFIELD, N. H.

Globe DURABLE FIREMENS Suits

for motorized equipment



SPECIAL W & K CONTINUOUS FLOW HOSE REELS

Wirt & Knox Continuous Flow Hose Reels can be made to any specification for top, rear compartment or side compartment installation. Swivel joints built into these reels permit space-saving installation.

W & K Continuous Flow Hose Reels are durable, built for reliable service with minimum maintenance. Standard or high pressure fittings can be obtained for pressures to 800 lbs.

For complete information on special or standard models, write Wirt & Knox Mfg. Co., 2312 West York St., Philadelphia 32, Pa.

WIRT & KNOX FIRE FIGHTING EQUIPMENT SINCE 1880

the township with the largest valuation pays the largest share of cost.

We are a volunteer outfit.

Concealed Spaces

(*Continued from page 929*)

connecting areas. If there is the slightest evidence of such extension, if unexplained smoke continues to emit some distance from the main body of fire, for example, check thoroughly, open up suspicious spaces and have lines and men ready to meet and control any fire.

Lurking Smouldering Fires Conducive to Backdraft

One of the most dread hazards of fire fighting is backdraft. Backdraft may be caused by the ignition of pent up gases suddenly brought into contact with oxygen of the air. The gases may build up great pressure in a confined space as a by product of a smouldering, slow burning fire, with just about enough oxygen available to prevent the fire from dying out. The quick opening of that space may release the gases to mix with the outside air, with resultant, possibly serious, explosion.

No matter how careful fire fighters may be in effecting openings in any structure that has been sealed up and in which fire has been "cooking," backdraft, or a kindred blast may occur. Although the concealed space fire is not necessarily a breeder of backdrafts, it is frequently associated with smoky fires in hidden areas where pressures have built up, undetected.

Attack on fires in concealed spaces calls for ample forcible entry tools, special hose fittings, such as partition nozzles distributors, applicators, cellar pipes, etc.

Even the best fire department under certain conditions may find itself lacking in such common tools as axes and plaster hooks.

Although not all fire chiefs will agree with the practice, small hand lines (such as 1½-in. hose) are proving increasingly acceptable in going after and controlling small fires in concealed spaces. So, too, is the use of water fog and wet water, the latter particularly where fire has burrowed into storages and stocks where ordinary water will not penetrate. Where a few men and limited number of lines must attack a fire that is extending through hidden arteries, possibly over a considerable area within a structure, the 1½-inch hose with suitable fog nozzles and fog applicators proves a real asset. Two men are usually sufficient to make openings and operate the fog or straight streams into and within the confined spaces. Of course, small lines should be backed up with heavier lines.

It is generally next to impossible to fight these lurking fires without making openings in floors, walls and/or ceilings. It may quite conceivably be necessary to open up far in advance of suspected or actual fire, or to create openings over a broad area to inspect for possible fire in a building. A company, or department may be unjustly criticized by property owners or tenants, or both, for apparent needless destruction of property. Obviously, the necessity for such exploratory cutting and other destruction should not be a license for "tearing the house apart." It calls for a bit of educating of the public by the fire ser-

vice. At least one large fire department, Los Angeles, has made a sincere attempt to explain to the city's citizens just why it may be necessary to cut a hole in a roof in order to locate and extinguish a fire that may be hidden in the basement.

The experienced fire officer never underestimates the possibility of concealed fire reigniting and breaking out of concealed areas or pockets. That's why he devotes so much time to overhauling. The bigger the fire extinguishing operation, (the more property involved, etc.) the more important it is to take time to overhaul the structure and kill all lurking, smoldering fires. Studies of overhauling emphasize the importance of searching for fire in such concealed spaces as window frames, casings and closets, over-stuffed furniture and the like. Out-of-the-way places where fire may hide are found in the *contents* of buildings as well as the buildings themselves. A serious hotel fire resulted from the failure to overhaul a bureau drawer in which fire or sparks remained, following a blaze that burned out the room interior. The rekindle required multiple alarm response.

Who Is to Blame for These Conditions?

There is no particular secret about the causes for these conditions. The blame must be shared by a number of interests, including the fire service itself.

Beginning with the property owner who, for reasons of economy or otherwise, insists upon these breeding places of fire, and refuses to safeguard them with adequate fire protective systems, to the architect and the builder who "go along" even when they know conditions constitute a hazard, we find the trouble stemming right at the source. Next, there are the tenants of the structures, permanent and transient, who contribute their share either by contributing to the hazard or by failure to report on the hazards and insist upon their elimination.

Civic officials must share blame because of their unwillingness to adopt building codes with teeth in them or, where such codes exist, to enforce them.

Some blame must be shared by fire departments and fire prevention bureaus which fail to locate such conditions or, where they are found, to fight to eliminate them. The hazard of the concealed space continues to exist, if not flourish, in many cities because municpal authorities so complicate and handicap the fire department's efforts to unearth and correct such conditions that inspections are more or less perfunctory, if they are made at all. Fire prevention bureaus should (1) be under fire department jurisdiction, and even more important (2) they should have full and complete jurisdiction over inspections of existing buildings, and the legal authority to determine violations, bring violators to court and get convictions where violations are not corrected.

Many fire chiefs believe responsibility lies also with insurance companies, which persist in insuring risks which are known to constitute hazards.

In some quarters there is a tendency to blame fire departments for failing to locate these hidden hazards or, where found, to notify the proper authorities of their existence. But speaking for the fire service, it must be pointed out that, in addition to the conditions above nu-

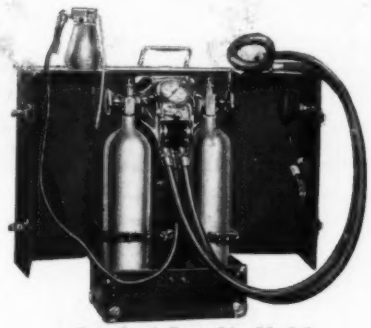
Chief, When a Life is at Stake and Every Second Counts—

You need a dependable, simple-to-operate resuscitator that will do most for the patient.

That's what you get with a Stephenson Resuscitator.

Let us show you its dependability, ease of operation and effectiveness at your next meeting.

Write today for demonstration. No cost or obligation.



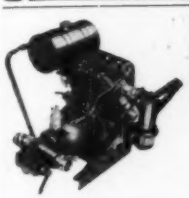
Standard Portable Model
Other Models to Fill Every Need

Saves Lives
Protect Your Community
Increase Your Department's Reputation and Prestige
With the New, Improved

STEPHENSON RESUSCITATOR

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Represented in Canada by SAFETY SUPPLY COMPANY, Toronto



Write for Bulletin 6600-F

WEIGHS ONLY 110 LBS.

MORE **EFFECTIVE** FIRE PROTECTION

CITY • RURAL • FOREST

MODEL 6600 PUMPER—Instantly Self-Priming—No waiting when seconds count
HIGH PRESSURE—Use one or two hard-hitting streams or fire-blanketing fog-spray
LIGHT WEIGHT—Easily carried to source of water or fire area
NEOPRENE IMPELLERS—Pump dirty water as well as clean water—assure long life
POWER—Efficient 4-cycle, air-cooled 5 HP engine known and serviced world-wide
BY-PASS VALVE, SPRING LOADED GREASE CUP, NO LOSS OF PRIME, PLUS MANY OTHER FEATURES

UP TO 40 GPM AT 150 PSI

MARINE PRODUCTS COMPANY
515 LYCASTE AVENUE • DETROIT 14, MICHIGAN

SPECIFY *Shuredry* TO BE SURE

FULTON'S SHUREDRY GREEN-BAK SALVAGE COVERS BRING FIRE LOSSES DOWN, DOWN, DOWN

APPROVED BY NATIONAL BOARD OF FIRE UNDERWRITERS AND BY FACTORY MUTUAL LABORATORIES

The salvage cover that's easier to handle because it's *lighter* and *extra pliable*. Shuredry salvage covers are more effective because they're pressure impregnated with the exclusive *"Shuredry"* treatment They rate tops in every test against water penetration and seepage! Specify *Shuredry* from your fire equipment dealer.

Fulton BAG & COTTON MILLS

Atlanta • St. Louis • Dallas • Denver • New Orleans • Los Angeles • Kansas City, Kans. Minneapolis • New York City, 347 Madison Ave. • Winter Haven, Fla.

BOOKS

For the Modern Fire Fighter . . .

Recognized by the Fire Service as Standard

Questions and Answers for Lieutenant and Captain—$2.50

Promotional Study Course for Firemen—$3.00

Fire Chief's Handbook—$4.00

Fire Service Hydraulics—$3.00

(The Above Prices Are All Postpaid)

CASE-SHEPPERD-MANN PUBLISHING CORP.

24 West 40th Street
New York 18, N. Y.

IT'S NO ACCIDENT!
When Firemen Order
JANESVILLE
TURN OUT SUITS

HERE'S THE REASON

It's because Janesville turn out suits painstakingly designed and manufactured to meet the practical needs of a fireman when he's fighting fires.

It's because wearers of Janesville suits know they will consistently find the same high quality army duck or pure gum rubber; the same comfort, the same strength where it's most needed.

Also available trimmed in Scotchlite . . . "lights up like a lamp" when light strikes its surface. Terrific safety factor in dark or in smoke filled rooms.

Write for Literature

Janesville APPAREL CO.
JANESVILLE, WISCONSIN

merated, the average municipal department has thus far been able to conduct little more than infrequent detailed inspections of properties and occupancies wherein such conditions are most likely to be found. Although two-way mobile radio on fire apparatus is encouraging broader and more detailed inspections on the company as well as departmental levels (by keeping inspecting companies 'in service') such use of modern radio communications is at present the exception and not the rule. The average department is too shorthanded in personnel to maintain intensive inspection work and to prosecute violators of codes and regulations.

There is still unlimited opportunity for fire departments to put into effect the policy of fighting fires "three ways" i.e.: (1) before they happen (2) when they occur and (3) after they have occurred.

After the Fire

From studies of the beforementioned incidents several additional conclusions are reached.

Each fire in which origin and extension was either due to, or aided by hidden spaces, might well be the subject for a fire department "post mortem" or critique following the incident in question. Conditions that created the initial hazard at the outset, and which handicapped the fire control and extinguishing efforts, should be reviewed and studied, at least by the officer personnel, if not all units.

Each such fire should produce evidence which should be taken as lessons to govern future policies and operations. In some cities the case histories of these fires furnish the basis for promotional examination questions, as well as for lectures on fire control and extinguishment.

At least one fire chief of our acquaintance makes it a practice to encourage suggestions from his official personnel on how to locate and combat these conditions. These ideas are discussed in pre-fire as well as "post mortem" conferences and often result in effective solutions of problems, which are passed along to the rank and file as orders and regulations.

A number of chiefs make it a practice to maintain a 'live' file on the subject. They get all possible information relating to it from the fire records of their own departments and outside; they conduct special studies of outstanding cases and use the information, where feasible, to secure publicity on this factor of fire spread as affecting local fire losses, and posible loses. The idea is to inform the public generally of the dangers presented by unprotected, "hidden areas" and of storing combustible materials or otherwise using the areas so as to contribute to the propagation and spread of fire therein.

Aid by Air

Four topnotch groups of Zuni and Apache forest fire fighters were flown to Sandpoint, Idaho, on Oct. 1, to help control a fire that burned out more than 1000 acres in the Kanksu National Forest. The 100 specially-trained Indians joined 125 other fire fighters already on the job. They are connected with the forest service in New Mexico.

—THUNDERBIRD "WINGSPREAD"

Rescue

(*Continued from page 932*)

Treat for shock throughout the above operations.

Serious Burns

Of all the accidents that can happen to the human body, serious burns rank third in consideration. Serious burns are major burns covering an extensive area of the body. If the burn is by fire, the answer, as far as the rescue squad is concerned, is simple.

If the victim's lungs were seared by heat or flame, he may die within a few minutes, from asphyxiation. If his lungs are intact, he may die within two or three days. If death occurs within two or three days, the cause is not necessarily the burn itself but can be attributed to the condition of irreversible shock. Shock, in serious burn cases, must be given first consideration. The only place that shock, in this instance, can be combated is in the hospital (or place with similar facilities) where blood transfusions can be given. The danger of infection is secondary to the danger of shock.

Do not use any greases, oils, antiseptics or liquids to dress the burns. The fire has come closer to sterilizing the burn than can be done with any kind of antiseptic as a field measure. Air and friction are painful to a burn, but if we attempt to exclude air and allay friction with grease or oil, we are only adding to the burden of the doctor who must remove what we have put on because he cannot trust any application made in the field. A sterile condition in the field is improbable. In removing what we have applied, the doctor makes worse the condition of the victim. Such removal is painful and can only add to the condition of shock, a condition into which the victim has already sunk deeper than when he was under our care. Do not attempt to remove foreign substances stuck to burns.

The most simple procedure by the rescue squad is by far the best procedure:

a. Leave all clothing on.
b. Bandage with smooth cloth; preferably sterile triangular bandages or sterile sheets.
c. Bandage feet and hands with same material without separating digits.
d. Wrap in blankets.
e. If the victim is in full control of his faculties, water, or water with salt added, or water with salt and soda added, may be given by mouth to help compensate for the loss of body fluids, but do not waste time with it if the ambulance has arrived.

If the burn is from acids, chemicals, alkalies or steam:

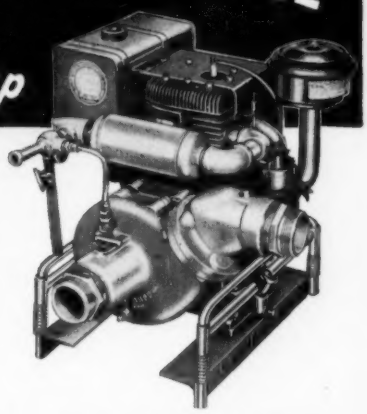
a. Flush off thoroughly with water.
b. Treate as above.

Do not attempt to neutralize. Exception—Carbolic acid should be diluted with rubbing alcohol before flushing.

If the burn is from electricity and the flesh is seared:

a. Check for stoppage of breathing.
b. Remove clothing from area, using shears.
c. Use dry, bulky dressing and bandage over area.
d. Maintain body warmth with blanket. Maintain circulation.
e. Check for other visible burns. In-

FOR BETTER FIRE DEFENSE
The DUAL
Fire Fighter pump



DUAL FIRE FIGHTER PUMP
MODEL 6201

Fire departments everywhere are enthusiastic in their praise of the **"Dual Fire Fighter"** pump. It has, on numerous occasions, saved property from costly fire damage, bringing fires quickly under control in isolated localities where large truck pumpers could not reach the source of water.

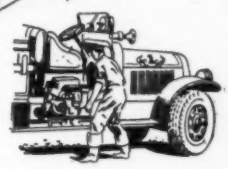
The **"Dual Fire Fighter"** is especially designed for fire fighting equipment. It is used **to relay water** to the truck pumper or it will **fight fires direct.** Mounted on a truck or trailer it is an effective piece of fire fighting equipment for rural volunteer fire departments.

- **As a booster pump** it will deliver 175 g.p.m. through 300 ft. of 2½ in. hose to the top of a hill 50 ft. high.
- **For fighting fire direct** it will throw 100 g.p.m. at 80 lbs. or 80 g.p.m. at 88 lbs. pressure .-- Capacity sufficient to supply two 1½ in. lines.
- **It primes in 15 to 30 seconds.** It weighs only 162 lbs. Equipped with carrying handles, easily carried by two men.

Quick action of the **Dual Fire Fighter** may assist **you** in saving costly fire losses.

Ask for Bulletin No. 9-FD-11

GORMAN-RUPP PUMPS



The "Dual Fire Fighter" requires very little space on the pumper. Pump is integral with 4 cycle, single cylinder, air cooled engine of 8¼ H.P. Every pump is factory tested before shipping.

THE GORMAN-RUPP COMPANY
MANSFIELD, OHIO

NEW FOGG-IT "Triple Jet" SAFETY NOZZLE

PAT. PEND.

provides a blanket of fog for small hazardous fires

Scientifically engineered to deliver a fine pattern of protective fog, even on low pressure water systems. *Fits on* any ¾" garden hose. Safely smothers incipient fires in containers of paints, oils, chemicals, etc. Eliminates dangerous splash created by straight stream of water.

Excellent fog tip for booster line work on grass fire when water conservation is important. Excellent in fixed installations. Keeps water damage to minimum since it delivers only 2½ gallons of water at 50 psi. Available for larger volume.

Machined from solid brass and completely guaranteed.

ONLY $3.00 EACH

FOGG-IT SALES COMPANY
Dept. 7-A, P.O. Box 1985, Modesto, California
"ASK ANY FIREMAN"

BADGER EMERGENCY BOAT

Designed Especially For

Rescue Work and Fire Fighting

Rugged construction to withstand hard use.

•

Exterior protected by strong Fiberglas laminate.

•

Stable - Fast
Easy to handle.

•

Use as water patrol or mobile trailer unit.

Equipped to suit specific use.

Write for Folder on Badger 'E' Boat.

BADGER BOAT BUILDERS COUDERAY, WISCONSIN

Champion Fire Apparatus

Champion Fire Pumps

44 PAGE BOOKLET of
FIRE APPARATUS & FIRE PUMPS

Write Today For Your Copy

W. S. DARLEY & CO., CHICAGO 12

ternal burns, you can do nothing for. Rush to hospital.

Comment

Because we have been taught differently in the past, and a lot of our information has been handed down from fireman to fireman, doubts may arise in the mind of the reader as to the efficacy of following the foregoing procedures, but he is assured that they have been studied and recommended by specialists in the field of medicine. Further, it will be found that the trend of advice to lay personnel by authoritative medical groups, who supply such advice on a nationwide basis, is toward simple and uncomplicated action in the adm nistering of first aid. The reader is asked to study this treatise further before forming too definite an opinion.

Transformer Bank Fire Gives Cincinnati Firemen Hot Time

A transformer installation fire can be serious, both because of its potential threat to the community served by the power company through loss of electric service, and to the fire fighters who may have to control the blaze. Nevertheless, usually, it is rare that such a fire calls for multiple alarm response.

That is what happened in Cincinnati, however, in October last. It began with an automobile accident in which a wooden power-line pole in front of fire alarm box 21, Red Bank Road, was knocked down. The scene is about half a mile from the location of the transformer station.

The accident caused a short circuit which, in turn, resulted in transformer failure and fire in the transformer bank. At the same time, power failed over most of the eastern section of the city including thousands of homes, industrial plants, and units of the fire department.

An alarm of fire was received at the fire bureau at 3:55 A.M., when flames were seen in the transformer bank in the rear of the 3300 block of Madison Rd. Officers in a passing police car, responding to the automobile accident, discovered the blaze and called the fire department. The first-due company, Engine 31, at 3217 Madison Road, was without electricity when the box came in. The men got dressed and "organized" by the lights on the apparatus.

When fire fighters arrived, sparks were leaping into the air in a dramatic fireworks display. Radiated heat was crackling windows in the Century Tool and Machine Co. plant, adjoining the installation on one side, and the fire was extending to a tenement house on the other side. A paper mill across the street also was threatened by the radiated heat.

Marshall Hall, who responded to the first alarm, sounded a second, and firemen concentrated on preventing extension of the threatening blaze, using water fog and straight streams. Later it is reported foam was applied to parts of the installation.

The blaze feeding upon the oil, used in cooling the transformers, developed such heat that a huge metal tower above the bank was melted down and reduced to a mass of twisted steel.

Firemen who operated with a wary eye for "hot wires" remained at the scene for over four hours. The chronology of alarms and response was logged

as follows: 1st alarm: Engs. 31, 46, 36; Lad. 16 Marshall J. Hall; Salvage 1.

2nd alarm: Engs. 32, 6, 16; Lad. 12; Amb. 1; Marshal V. Armstrong; Salvage 2; Chief B. J. Houston; Asst. Chief Leo Kuhn; John Frank, Salvage Corps.

Additional apparatus was called in by radio. Dispatcher F. Keating; Operator John Kelley.

New Hampshire Forest Fire Fighters Meet

During the past Summer, forest wardens and fire fighters of the Canaan, East Hill, Newport, Enfield and neighboring areas in New Hampshire held meetings, drills and friendly contests in the interests of better fire protection.

Sparking some of these meetings was Thayer Nutter, Deputy Warden, Enfield East Hill Fire Fighters of Canaan, N. H. On June 29, East Hill Forest Fire fighters and guests held their second annual outdoor field day. The program was conducted at the East Hill Farm, home of Thayer Nutter, where, despite inclement weather, the fire fighters had a "field day" in spirit and in deed, extinguishing various types of fires with different fire appliances.

Assisting in the event was District Fire Chief James Q. Ricard of Canaan, Enfield Forest Fire Warden Clarence Arnold, and others.

In August, the Grafton-Sullivan Forest Fire Wardens' Association held a picnic and field day at Spectacle Pond in Croydon, N. H. More than 300 persons registered for the occasion. The events included pumping and other firemanship contests, the former being won by a team from Sunapee.

East Hill Forest Fire Fighters, under guidance of Nutter, have a well organized, fast working group. Their operations are attested by the fact that since 1950, when they were organized, there have been no forest fires worth recording. Commenting on attacking such fires, Nutter said: "A small number of men who know how to use equipment and who can get to the equipment quickly in the event of a fire in the neighborhood, is much more important than anything else. In many New England townships, there are sections of the town several miles from the town center where the fire engine is kept. If a group of men are ready to start instantly on notice, if they have adequate equipment available and can get to the fire before it gains much headway, the group can prevent a disastrous fire.

No Flying Over Forests

Pilots have been permanently banned from flying planes lower than 4,000 feet over Superior National Forest, Minnesota. The forest is operated under the U. S. Department of Agriculture and the order, it is said, was the result of a decision that planes provide a fire hazard.

False Alarm Brings Death in Sliding Pole Accident

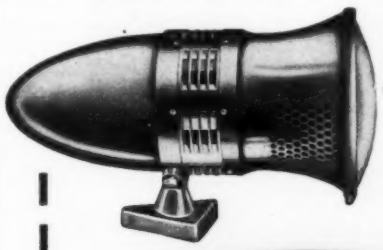
A Manhattan fireman, responding to what turned out to be a false alarm of fire, lost his grip on the sliding pole at his fire station, and plunged one floor to his death.

He was Richard Therkorn, 25, attached to Ladder 26, 114th St. and Madison Ave. The false alarm came from Morningside Ave. and 119th St.

We haven't heard of any dog sleds using Ansul equipment. But if they do there is no need for concern because of the low temperatures involved.
Hundreds of Ansul Dry Chemical Fire Extinguishers are protecting hazardous locations and special equipment in the far north.

Standard Ansul models are approved for operation from –40°F. Special low temperature models are approved by Underwriters Laboratories for operation down to –65°F. All Ansul extinguishers provide effective and dependable protection for flammable liquid, gas and electrical fires.

SEE PAGE 949



MODEL 20 SIRENLITE
for Emergency Vehicles

Siren sounds a penetrating warning, red light automatically flashes authority. Traffic opens instantly, day or night. FREE ROLLING feature.

STERLING SIRENS

■ HANDSOME
■ RUGGED
■ RELIABLE

Built by proud craftsmen to the highest standards of precision manufacturing . . . utilizing materials of finest quality . . . Sterling Sirens give year-after-year of unsurpassed dependability and satisfaction.

MODEL M GENERAL
FIRE ALARM SIREN
for Volunteer Systems

Quick acceleration, power-plus . . . Model M really gets the boys out in a hurry! Used by championship companies from coast to coast. A dependable, heavy-duty siren built of the finest materials throughout.

Complete line of Siren Equipment • *Bulletin on Request*

THE STERLING SIREN FIRE ALARM CO., INC.
58 ALLEN ST., ROCHESTER 6, N.Y.

FIRE LITE ALARMS

We Strive To Save Lives, Too!

Through continuous research and in cooperation with fire and safety officials, we have perfected a dependable home fire alarm system. It is a great satisfaction to know that our efforts have been responsible for saving many lives in fires.

Information about the Fire-Lite Home Fire Alarm System can be obtained by writing to us.

FIRE-LITE ALARMS
Incorporated
174 Shelton Ave., New Haven 2, Conn.
Dept. A-11
Member National Fire Protection Association

FIRE and POLICE UNIFORMS

SHIRTS
BADGES
CAPS
ACCESSORIES

RUSSELL UNIFORM
NEW YORK

RUSSELL UNIFORM CO.
192 Lexington Ave.,
New York 16, N. Y.
Please send free catalog checked below:
☐ Fire Department Uniforms and Equipment
☐ Police Department Uniforms and Equipment
Mr. .....
Address .....
City ..... Zone ..... State .....

News of the Manufacturers

(*Continued from page* 944)

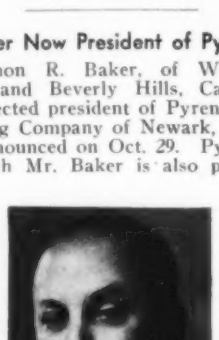
side (gunwale), and the boats are broad enough to make this a safe operation. Beam at the stern is sufficient to allow one or two men to manipulate drag or drags and still allow operation of the motor. Using a reversible motor, the boat can rapidly reverse direction and make a second pass over suspected hits. There is ample room for relief men and gear.

Room is provided on seats for two stretchers, and a resuscitator can be carried in the compartment under the front deck. When used as an auxiliary fireboat, the pump can be permanently mounted midships, or can be secured by means of quick-release hooks.

The basic hull design is reported adaptable for modification to suit specific needs of individual fire departments. Its dimensions are 15 ft. 10 in. length by 62 in. width.

Baker Now President of Pyrene

Solomon R. Baker, of Worcester, Mass., and Beverly Hills, Calif., has been elected president of Pyrene Manufacturing Company of Newark, N. J., it was announced on Oct. 29. Pyro, Inc., of which Mr. Baker is also president,



Solomon R. Baker

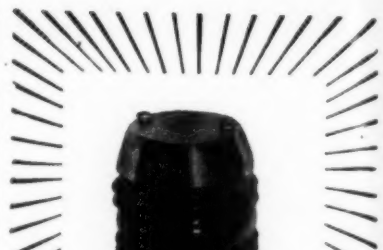
purchased a majority stock interest in the well known manufacturer of fire fighting equipment a few months ago. Mr. Baker is senior partner of Baker and Baker, Certified Public Accountants, of Worcester, Mass., and is a member of the American Institute of Accountants.

Announcement was also made of the recent election to the Pyrene Board of Directors of Abraham M. Sonnabend, of Boston, Mass., Samuel Botwinik of New Haven, Conn., and Wilbur A. Cowett of New York City.

5,451 Take New York Fireman Test

Examinations for entrance in the New York Fire Department were taken by 5,451 young men in October. This was almost 20 per cent less than the number of applicants, the Municipal Civil Service Commission reports. The Commission had summoned 7,047 men to appear for exams, but 1596 were absent.

The men who took the written tests in October will qualify for medical tests in the Winter; those medically fit will then compete in the six-part physical exams to be held in the Spring.



IL

FOR ALL AROUND PROTECTION

IL—Identification light — roof mounted, visible from all directions for quick identification. Flasher mounted in top. Polished aluminum castings, red, blue and amber fresnel lens also available.

Arguslite for economy—for quality

ARGUSLITE CO.
BLUE RIDGE SUMMIT, PENNA.

McINTIRE GATE VALVES

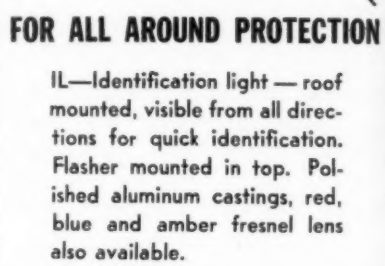


Fig. 164AN
4½" swivel female x two 2½" male Gated Siamese. Quick opening, ¼ turn valves.

Fig. 163
Made either Right Hand or Left Hand
2½" male x female, gate valve.

F. N. McINTIRE BRASS WORKS
377 PUTNAM AVE., CAMBRIDGE 39, MASS.
1837 - - - - - - - - - - - - - 1952

Canadian Forums

(*Continued from page 937*)

Quebec, Arvida, Sorel, Three Rivers and Sherbrooke, Que., with two fire chiefs from Montreal Island municipalities, Sydney, Glace Bay and Kenville, N. S., and Moncton and Fredericton, N. B.

The concluding Forum will be attended by deputy fire marshals of the provinces and armed forces, as well as the deputy fire chiefs or chief instructors from Vancouver, Edmonton, Calgary, Winnepeg, Windsor, Hamilton, Toronto, Ottawa, Montreal, Quebec, Halifax and St. John's, Nfld., and by United States fire services representatives.

Each forum spends two days in the study of planning and organization necessary for the handling of mass fires after various types of atomic attack. The city of Hamilton has been chosen as a typical Canadian city for purposes of the exercises.

It is hoped the studies and the recommendations from the more than 75 experts who will take part in the forums, will result in concrete proposals for the planning and equipment to go into a basic pattern for Canada's civil defense fire-fighting plans.

Preparation of F. D. Examinations

Cities are sometimes faced with the problem of preparing fire department promotional examination questions, especially for the higher ranks in the department, where qualified technical assistance is needed but is not available locally.

Such assistance can be had if the local civil service commission knows where to turn.

The largest municipal civil service commission in this country is that maintained by New York City. Included in this commission are a large staff of specialists in all phases of municipal engineering. Those connected with the preparation and rating of fire department examinations rank among the most capable in the country.

It is suggested that municipalities seeking assistance in this line contact S. Hoberman, Ph.D., c/o Municipal Civil Service Commission, 299 Broadway. New York City.

Revised Edition of "The Firemen and Electrical Equipment"

A new, revised edition of the bulletin "The Firemen and Electrical Equipment" has been issued by the Department of Public Instruction, Lansing, Michigan. The revised edition, known as Bulletin No. 280, includes a number of minor changes based on recommendations made by members of the Safety Committee of the Edison Electric Institute, as well as the objective of bringing it into conformity with current utility practices.

The original editions of this comprehensive work have had wide popularity among members of the fire service and led to its being distributed by the International Association of Fire Chiefs. It is expected the revised edition will be received with equal acclaim.

The Bulletin of 52 pages and cover, plastic bound, may be secured by addressing the University of Michigan Press, Ann Arbor, Michigan. Single copies are 50c each with discounts for quantities.

Small lines, faster attack with Myers high pressure fog equipment

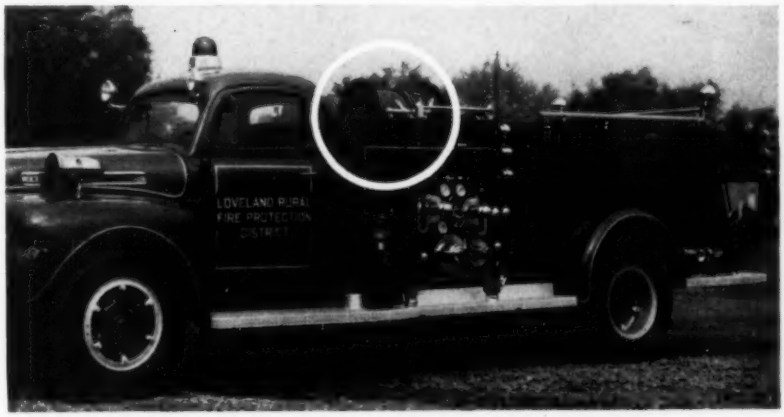


Photo courtesy AMERICAN-LAFRANCE-FOAMITE CORP.

Myers high pressure fog equipment offers these advantages: (1) More efficient water application because the pressure breaks the water into smaller particles which absorb heat faster (2) High pressure fog can be used on many more fires since the length of the fog stream is 60 to 70 feet (3) High pressure fog can be used on nearly all types of fires. Write for complete information on Myers Bulldozer high pressure pumps and fog guns for your apparatus. The F. E. Myers & Bro. Co., 259 Orange Street, Ashland, Ohio.

Better Hose Care--- with CIRCUL-AIR

UL SA

THE AIR CONDITIONING
FIRE HOSE DRYER

PATENTED

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. NO OTHER DRYING METHOD IS SO FAST—SO ECONOMICAL—SO EASY TO USE.

ACCEPTED • APPROVED • RECOMMENDED

ACCEPTED as the standard drying medium in over 1500 fire departments — APPROVED by the leading testing laboratories — RECOMMENDED by fire hose manufacturers and Fire Chiefs "all over America."

If you are building, send for free copy of "Fire Station Design"

NEW HOSE DRYING MANUAL
TELLS HOW TO DRY, STORE AND CONSERVE FIRE HOSE
May we send you one?

THE CIRCUL-AIR CORPORATION
575 East Milwaukee Detroit 2, Michigan

BODY-GUARD
BUNKER SUITS
FOR COMFORT & PROTECTION

WE ARE DISTRIBUTORS FOR

SIREN BOOTS

We have been supplying FIREMEN'S CLOTHING for over 25 years.

Any fireman can have a catalog by writing —

BODY-GUARD MANUFACTURING CO.

ST. JOSEPH · · MISSOURI

Chief - - -
CAN YOU PUT OUT A CHIMNEY FIRE for 65¢? —YOU CAN WITH IMP

CHIMNEY FIRE EXTINGUISHER

Save rushing to chimney fires—avoid slippery roofs by using IMP Chimney Fire Extinguisher. Just throw a 65c package "as is" on the hottest part of the fire in the stove, furnace or fireplace. The chimney fire will be out in jigtime without water or chemical damage. Recommended by many chiefs who carry IMP in their cars. ALSO—LIQUID IMP for *oil fired units*, is as much a fire preventative as pkg. IMP. Saves oil, money, increases heat, prevents sludge, reduces carbon deposits and is safe. You know what a fire hazard sludge is. Use LIQUID IMP in your own burners. 3½ oz. enough for 90 gals. kerosene or 55 gals. No. 2 fuel oil; 16 oz. enough for 5 times above quantity; 1 gal. enough for 1600 gals. #2 fuel.

USE THIS COUPON FOR YOUR ORDER

F. C. FOARD & CO., Box 481, Bridgeport 1, Conn.

Please send.....doz. package of IMP @ $7.80 per doz.
and/or.....doz. 3½ oz. Liquid IMP @ $9.00 per doz.
.....doz. pint Liquid IMP @ $27.00 per doz.
.....quarts Liquid IMP @ $4.40 per qt.
.....gallons Liquid IMP @ $14.00 per gal.

I will honor your bill f.o.b. Bridgeport.

NAME.....

ADDRESS.....

CITY.....STATE.....

FIRE EQUIPMENT DISTRIBUTORS ATTENTION! Add package and Liquid IMP to your line. Write TODAY for special distributor Plan.

Book Shelf

THE CLASSIFICATION OF FIRE HAZARDS AND EXTINCTION METHODS. By James D. Birchall with a foreword by H. W. Coleman C.B.E. M.I. Fire E., Pub. by Ernest Benn Ltd., Bouverie House, Fleet Street, London EC4. Price 7s 6d net.

A great deal of essential information of value to the fire fighter is encompassed within the 98 pages and cover of this latest British text. The basis of the book is a table of general hazards in which fires involving common combustibles have been classified, together with those extinguishing agents which are most effective in combating them.

In brief, the contents are arranged under three Sections, the first covering General Hazards and Metals; the second, Hazards Involving Plastics; and the third, Gases, Dusts and Chemicals; Spontaneous Ignition. The individual hazards are further broken down according to "Class A, B, C, fires," etc.

The book contains an index and a bibliography which includes related British and American references.

DICTIONARY OF ARCHITECTURE by Henry H. Saylor, John Wiley & Sons, Inc., 440 Fourth Ave., New York 16, N. Y.; 228 pages and cover. Price $4.50.

There are numerous dictionaries of architecture but most of them are not available to the average fire officer and if they are, they are hardly what he desires either as to price or contents. This new dictionary seems to meet the need for a handy volume, in which one can find the spelling, pronunciation (if unusual) and concise definition of terms met in the study, historical reading and practice of architecture.

The author is editor of the Journal of the American Institute of Architects.

With Our Readers

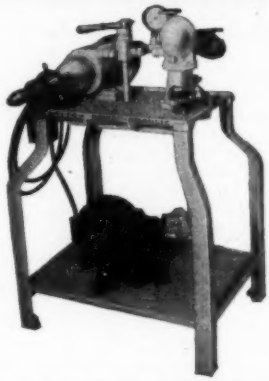
Sodium Xanthate

To the Editor:

I would like to report a fire we had here that I believe is the first of its kind in fire service history.

We had two trucks loaded with sodium xanthate, which is used to defoliate cotton. One of the trucks caught fire sixteen miles west of here. It was reported to me by a tourist so I went out to see if I could do anything to help save the truck and possibly the highway.

When I arrived at the scene, the contents of the semi-trailer were completely on fire so we were unable to do anything with what water we had. I believe, however, that if the driver had done what I tried to get him to do we might have saved the semi-trailer. I tried to get him to hook up to the trailer and pull the side boards off the trailer on the low side of the road, and start driving and shoving the contents off of the trailer, but he was afraid the gasoline tanks would explode. I was not so worried about this, however, because I intended to drive alongside him and keep the tanks cool with the fire truck's water. The suggestion wasn't tried and we lost the trailer and contents.



IN ANY FIRE STATION
LARGE OR SMALL . . .

DAYTON HYDRAULIC EXPANDER
MEANS BETTER HOSE CARE

Expands Couplings from ¾" to 6" Size
Tests Hose Up to 700 Lbs.

Extra Attachment Removes Expansion Rings from Old Hose
More Pressure — Larger Motor — Roomier Work Table

Regardless of the size of your department, there is an Expander for your requirements.

Send for Illustrated Bulletin

Dayton Fire Equipment Co.
1242-48 W. 2nd St., Dayton 7, Ohio

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP MANAGEMENT, AND CIRCULATION OF FIRE ENGINEERING, published monthly at New York, N. Y., for October 1, 1952.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Case-Shepperd-Mann Publishing Corp., 24 W. 40th St., New York 18, N. Y.; Editor, Fred Shepperd, 24 W. 40th St., New York 18, N. Y.; Managing editor, Fred Shepperd, 24 W. 40th St., New York 18, N. Y.; Business manager, I. H. Case, 24 W. 40th St., New York 18, N. Y.

2. The owner is: Case-Shepperd-Mann Publishing Corp., 24 W. 40th St., New York 18, N. Y.; I. H. Case, 24 W. 40th St., New York 18, N. Y.; Fred Shepperd, 24 W. 40th St., New York 18, N. Y.; Karl M. Mann, 24 W. 40th St., New York 18, N. Y.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

I. H. CASE, *Business Manager*

Sworn to and subscribed before me this 26th day of September, 1952.

EVA LEWIS,
[SEAL] *Notary Public.*
(My commission expires March 30, 1953)

A Necessary Piece of Equipment for Every Emergency Vehicle

"BRIDGER" LIFE GUN

Send for our interesting booklet and list of cities using "Bridger" Guns.

The "Bridger" Life Gun will shoot a line up to 250 ft. with heavy line or 600 ft. with light line.
We handle a complete stock of replacement shot lines; cartridges; projectiles; also rewinding machines.

Distributed by:

Nelson Equip. Co., Portland, Oregon
American Fire Equip. Co., Boston, Mass.
Fire-End Products, New York, N. Y.
Chapco Fire Fighting Equip., Manitoba, Canada
Bickle Seagrave Ltd., Ontario, Canada
Justin A. McCarthy Co., Boston, Mass.
Midwest Fire & Safety Equip. Co., Indianapolis, Ind.
The Gerstenslager Co., Wooster, Ohio
Graham Fire Equip. Co., Richmond, Va.
Levitt Safety Ltd., Toronto, Canada
W. S. Darley & Co., Chicago, Ill.
L. N. Curtis & Sons, Oakland, Calif.
Maxim Motor Co., Middleboro, Mass.
O. C. Wipper Associates, Coral Gables, Fla.
George L. Hunter, Schenectady, N. Y.
Seagrave Corp., Columbus, Ohio
Woodhouse Mfg. Co., New York, N. Y.
Western Fire Equip. Co., San Francisco, Calif.
Blanchard Associates, Inc., Winthrop, Me.

NAVAL COMPANY
DOYLESTOWN PENNSYLVANIA

MEMCO AERIAL LADDER

The MEMCO AERIAL LADDER is an economical all-metal ladder unit designed to be installed on existing truck or to be installed on new equipment by your fire truck manufacturer. Electrically raised and lowered by power from the truck battery.

For details write...
MEMCO DIVISION of
DE-LUX NEON MFG. CO.
1007 N. W. 36th Street
Oklahoma City 3, Okla.

This chemical was produced, I am told, by a large chemical company and I understand should not have fired spontaneously. Nevertheless we could not find out any other source of ignition. So we decided to check the second truck. We found that it was also developing quite a lot of heat. Therefore, the chemical company was called long distance and they flew a chemist out from San Francisco to check on it. The second load was condemned and burned.

I am unable to find out much about this chemical but I am warning my fellow firemen, or whoever might be using it, to store it in a safe place where, if it did fire up, it would do no damage. This chemical is not supposed to heat, but this shipment did, and it might happen again.

I am not condemning the chemical or the company; I merely want to state the facts and offer this warning to possible users to be careful.

DANNIE SIMONDS
Chief of Fire Dept.,
Deming, New Mexico

County-Wide Coordination in Time of Emergency

A plan for the co-ordination of all fire departments in Kent County, Michigan, to meet an emergency arising from bomb warfare or other calamitous circumstance was announced in October by Kent County civil defense director, Gerald R. Ford.

The plan was outlined to a committee of chiefs and others by Fire Chief John R. Weber, of East Grand Rapids, who was instrumental in drawing it up. Copies of the plan will later be submitted to all fire departments in the suburban and rural areas for study of fire chiefs and township officials. A form of simple agreement will be sent various fire departments or their township authorities for their signatures, according to Grand Rapids Fire Chief Frank H. Burns, who is one of the promotors of the plan, and is chairman of the special fire protection committee appointed to study the proposition.

On the committee, besides chairman Burns and Chief Weber, are Robert Amsterberg, superintendent of the fire alarm bureau of the Grand Rapids Fire Department; Walter Mellor, marshal of the Wyoming Township Fire Department, and Adolph Nelson Chief of the Kent County Fire Department.

In general, the idea is to make the best use of all available equipment and personnel in time of calamity. The plan as drafted reads: "Not only must fire protection forces be expanded to meet the threat of wartime fires, but organization must be such as to provide for the rapid concentration of large fire fighting forces when and where needed and at the same time provide adequate protection for all other cities, towns and communities within the area concerned. . . . The Kent county civil defense fire service plan (as it is called) is predicated on the thought that, because of the very serious threat of fire, we must resolve to help ourselves and at the same time be willing and capable of rendering effective assistance to others . . . experience appears to indicate that neither the federal government nor the state will be able to supply the facilities or manpower in quantities sufficient to cope with fires that may result from direct or

A Gift Suggestion:

If you have in mind a little Christmas remembrance for some of your friends in the fire service, why not make it a year's subscription to FIRE ENGINEERING?

There is hardly a gift that would be appreciated more—and it carries its friendly greeting the year 'round.

Just send us the names and addresses (we'll check and let you know promptly if any are already on our list) and then just before Christmas a copy of the December issue will be sent to each along with a letter stating that a year's subscription is being entered with your compliments and the season's best wishes. We'll bill you at $3.50 each. That's simple enough, isn't it?

Better attend to this now, before the rush starts.

Subscription Dept.

FIRE ENGINEERING
24 W. 40th STREET
NEW YORK 18

indirect enemy action or fires starting from other causes that may reach disaster proportions.

"The plan envisions the use of all apparatus, equipment, facilities and manpower available for fire protection within the county in the most efficient manner possible under emergency conditions."

Boy Hero in Dynamite Truck Fire

Harold Miller, 15, was called a hero in Saginaw, Mich., on October 27 for driving a dynamite-laden truck through a shower of sparks to safety. He and a friend discovered the truck parked 15 feet from a building in flames. A woman ran out of a nearby house and shouted to the boys that her husband, an explosives contractor, stored dynamite in the building and that the truck was also loaded with the explosives. She motioned the boys to get away.

Instead, the boys started unloading cases of dynamite, carrying them out of reach of the fire. When flames threatened the truck, Miller grabbed the keys from the contractor's wife and drove the vehicle away just as firemen arrived. As the latter started operations, a blast blew out one of the walls of the building. Nine fire fighters were slightly injured.

Halloween Masks Found Flammable

New York State and City officials instituted a state-wide hunt for flammable halloween masks which could cause "serious facial burns and possible blindness," during the final days of October. Masks, made of a plastic-like material, were found which, in tests, burned with the speed of celluloid, it was said. The entire staff of New York City's Division of Combustibles were ordered out to round up stocks of the masks, believed sold only through retail chain stores. Appeals were made to parents through press and radio to beware of the products which were said to be of the domino type of "half-mask."

Keyport Force Celebrates 75th Anniversary

The Keyport, N. J., Fire Department shares with this journal the distinction of three-quarters of a century of progress. The same year that saw the birth of what is now FIRE ENGINEERING witnessed the inception of Hook & Ladder Co. No. 1, Keyport Fire Department. This was less than two weeks

Rate $8 per inch less 10% for three or more consecutive insertions.

Classified Advertisements

Closing date for copy 25th of month preceding date of issue.

HEARSES AND AMBULANCES

1950 Miller Cadillac Hearse rear load 100%
1948 Henney Packard Ambulance
1948 Superior Cadillac Landau 3-way Lev.
1948 Henney Packard Hearse 3-way Elec.
1948 Henney Packard Hearse 3-way Manual
1947 Superior Cadillac Ambulance
1947 Fixible Buick Ambulance
1941 Packard Hearse, 3-way Manual (Levelizer)
1941 Miller Cadillac Ambulance
1941 Superior Cadillac Ambulance
1941 Fixible Cadillac Hearse 3-way
1939 Superior LaSalle Ambulance 100%

All in excellent condition and guaranteed

Superior-Cadillac Distributor
WOLFINGTON BODY CO., INC.
33rd & Arch Sts., Philadelphia 4, Pa.
BAring 2-5252

Showroom, Parts & Service:
5801 Lansdowne Ave., Ph. TR 7-8882

WANTED

Assistant Manager, Fire Hose Sales for a nationally known industrial rubber products manufacturer, who has a complete line of all types of hose and other items for fire fighting purposes. Position will require both inside and outside sales work. State qualifications in first letter. Box No. 385, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

FOR SALE

1936 Darley Apparatus on Dodge Chassis, 400 GPM Front Mounted Pump, 300 gallon Booster Tank, Ladders, Booster Hose, Suction Hose, etc. Mail inquiries to:

GENOA FIRE DEPARTMENT
P.O. Box 31
Genoa, Ill.

! CLOSE OUT SALE !
SAVE MONEY
HOSE & ACCESSORIES AT GREATLY REDUCED PRICES

UNUSED SURPLUS

1½"x50' DJ CRL fire hose, unused, but soiled .....$ .54 ft. cpld.
1½"x50' SJ CRL fire hose, unused, but soiled .....$ .29 ft. cpld.
2½"x50' SJ CRL fire hose, unused, but soiled .....$ .49 ft. cpld.

UNUSED & CLEAN FACTORY PACKED

1½"x50' SJ CRL fire hose....$ .34 ft.
1½" couplings attached ...$ 4.50 set
2½"x50' SJ CRL fire hose....$ .60 ft.
2½" couplings attached ...$ 6.75 set
2½"x10' hard suction hose....$14.50 lgth., cpld.
1"x50' booster hose .....$ .33 ft., cpld.
4"x16' DJ soft suction hose, 4½" couplings, long handle female .....$16.50 lgth., cpld.

BRASS ITEMS

Mechanical Foam playpipes (Leading Manufacturer) w/adapter (Cost $50.00 each) .....$8.50 ea.
2½" nozzle holders .....$ .95 ea.
2½" hose caps & chains.....$2.50 ea.

IMMEDIATE DELIVERY

TOWSON HOSE & RUBBER CO.
104 West Joppa Road
Baltimore 4, Maryland
Phone Towson 1672

MANUFACTURERS REPRESENTATIVES WANTED

One of the established manufacturers of quality fire truck pumpers, hose and allied products, desires aggressive and dependable sales representatives in Wisconsin, Iowa and Oklahoma. Write to:
CENTRAL FIRE TRUCK CORPORATION
c/o H. J. Rush, Sales Manager
4437 Manchester Avenue
St. Louis 10, Missouri

FOR SALE

10 ft. Hard Rubber Suction Hose, 4½ N.S.T. Brass	$35.00
4 gal. Hand Pumps, with 10 ft. Hose....	7.00
4½x2½ Pumper to Hydrant Connections N.S.T.	5.00
2½x2½x2½ Double Clapper Valves N.S.T.	3.00
2½ Double Males N.S.T.	2.00
2½ in. Combination Fog Nozzle. Solid stream with shut-off. Brass N.S.T.	35.00
Hose Ladder Straps	1.00
1½ in. Combination Fog. solid stream, with shut-off. Brass Nozzles I.P.T.	25.00
2½ S.J. Surplus Fire Hose, N.S.T., per foot	.65
2½ D.J. Wax & Gum Fire Hose, per foot.	1.50
1½ D.J. Wax & Gum Fire Hose, per foot.	1.10

FRANK SHORTNER
EDGAR, WISCONSIN

TERRITORY OPEN

NEW YORK—Westchester, Putnam, Dutchess and Orange Counties open to aggressive salesman to sell well-known fire apparatus. Box 375, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

FOR SALE

New Barton 350 Front End Pump and new Mid-Ship 500 Darley Pump. We rebuild and exchange any make fire pump. Have American-LaFrance and Seagrave used parts.

J. E. FRENCH
P.O. Box 2401
Tulsa, Okla.

FOR SALE

One 2 H. P. Federal Siren, 110 Volt A-C Current in A-1 condition. Selling Price $150.00. Write to:

MANCHESTER VOLUNTEER FIRE DEPT.
Manchester, Missouri

MANUFACTURERS REPRESENTATIVES WANTED

Old established manufacturer of nationally advertised municipal fire hose wishes to improve distribution. Seeking reliable experienced representatives and distributors. Box 380, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

NEW FIRE DEPARTMENT TIE-CLASP

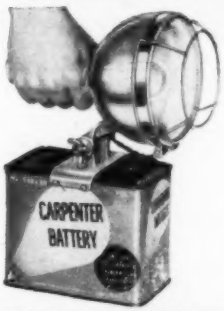
Something new and different in Fire Department Tie-Clasp. A clasp with a modern piece of fire apparatus, beautiful in design and color. The ideal Xmas gift for anyone connected with the Fire Service. Post Paid $1.50.
S. S. COBB
8511 Chesapeake Blvd.
Norfolk 3, Virginia

FOR SALE

1938—500-gallon Pumper with 300-gallon Booster Tank with 24-ft. Ladder—Pike Pole—Bell—Crow Bar—200 ft. Booster Hose—Nozzle—Foam Extinguisher—1 CO_2 Fire Extinguisher—First Aid Kit—Two 700 Big Beam Spotlights. In good operating condition and ready for service.

WRITE—BOX 7, OLDWICK, NEW JERSEY.

CARPENTER LIGHTS



HIGH POWER PORTALITE

The finest dry battery portable light made. Mile range. Powerful searchlight beam for 8 to 10 continuous hours. Instantly ready for any fire. Diameter 6". Size 14" high x 10" x 6". Only 9 pounds.

ALL KINDS OF EMERGENCY AND SPECIAL LIGHTS FOR CARS, PUBLIC UTILITIES AND INDUSTRIES.

CARPENTER LEADS THE WORLD IN PORTABLE AND EMERGENCY FLOOD and SEARCHLIGHTS

One of 100 Carpenter Emergency Lights. Write for Catalog

CARPENTER MFG. COMPANY

BOSTON-45-SOMERVILLE, MASS.

Morning Pride

FIRE SUITS

Rubber or Duck
FLEECE LINED

•

NEW DOUBLE DUTY CHEST PROTECTOR

For Summer fold together and snap to coat.

For Winter unsnap for full protection of chest.

SUSPENDERS
MITTENS
GLOVES
DETACHABLE LININGS

See Your Local Dealer or Write

MORNING PRIDE MFG. CO.

1986 HOME AVE., DAYTON 7, OHIO

after a disastrous fire that almost wiped out the entire business section of the municipality.

Today, the department consists of seven major fire units. In addition to the Ladder Company, there are Keyport Engine Co. No. 1 (1889); Lincoln Hose Co. No. 1, East Keyport (1893); Raritan Hose Co. No 2 (1893); Liberty Hose Co. (1893), and Eagle Hose Co. No 4, serving West Keyport (1900). In 1910 a separate fire patrol unit was organized, making the seventh fire force of the Borough.

The municipality also boasts a fully equipped first aid squad, one of the first volunteer organizations of its kind in the area, set up in 1928 with its own headquarters and two ambulances.

Fall From Truck Kills Fireman

Alexander O'Hara, 41, member of the Keeseville, N. Y., Volunteer Fire Department died two days after he fell from a fire truck en route to a fire which destroyed the Boland-Martin sawmill.

The accident occurred as the apparatus turned a corner. A speeding auto forced the truck, which was reported traveling about 15 miles per hour, to make a quick swing. O'Hara, riding atop the truck, had removed his shoes preparatory to putting on his boots and was catapulted to the roadbed where he suffered head injuries from which he failed to recover.

U. S. Can't Meet Atom Blow

Federal Civil Defense Director Millard Caldwell said in October the United States is in "no position" to meet an atomic attack and is "extremely fortunate" that none has occurred.

He claimed neither Congress nor the Defense Department had grasped the meaning of the important role civil defense could play if enemy bombers hit this country.

Because Congress cut the $600 million civil defense budget recommended to $42 million, Mr. Caldwell said his agency has been able to stockpile only a third of the emergency supplies it would need in an attack.

In contrast with what he called apathy on the Federal level, Mr. Caldwell expressed delight at the civil defense work done by states, cities and individual volunteers. Beginning November 10, a drive will begin to recruit 15,000,000 volunteers to supplement the 3,500,000 already signed up.

Near-Tragedy at Tournament

Three tournament officials suffered minor injuries and narrowly escaped more serious results, when a Bayport, L. I., fire truck got out of control in reverse, during the Motor Hook and Ladder Event at the 59th Annual Parade and Tournament of the Suffolk County Volunteer Firemen's Association.

The accident, which happened on the North Allegheny Course, crushed the three officials, Oscar Combs of Oceanside, Louis Murdock of Islip and George Lewis of Huntington, all of Long Island, against a snow fence. Murdock's arm injury required several stitches; Combs and Lewis return to their duties in the tournament after first aid treatment.

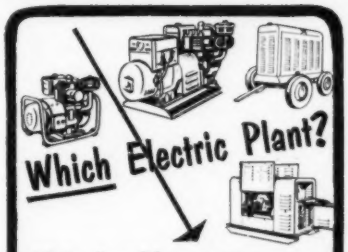
Thanks, JACK KEARNS.

BADGES by Everson-Ross

One of the oldest and always — one of the best!

Do you have our latest circular of Fire Badges? It's yours for the asking.

EVERSON-ROSS
88 CHAMBERS ST NEW YORK 7 N Y



Which Electric Plant?

This booklet helps you choose the right unit for your needs.

This free booklet will help you select the right type, the right size, starting method, etc. for your particular application. *Whatever* you need, you'll find it in the "U.S." line — for U.S. builds over 300 models, backed by more than 60 years of manufacturing experience!

U.S.

UNITED STATES MOTORS CORP.
430 Nebraska St. Oshkosh, Wis.

Please send me the free booklet on Electric Plants. I am interested in
☐ Gas powered, ☐ Diesel,
☐ Gasoline powered

Name .....
Address .....
City ..... Zone .... State .....

Your rescue car can be designed and built to fit YOUR requirements

Every Gerstenslager Rescue Car is designed and built to individual specifications developed and approved by the safety department responsible for its performance. You get a vehicle specifically suited to the safety needs of your community—metropolitan, suburban, or semi-rural.

Specialized experience and production methods in the Gerstenslager plant make it possible to design and manufacture your individualized rescue car at moderate cost.

A member of our nationwide staff of field sales engineers will help you to obtain exactly the type of emergency unit you need.

The GERSTENSLAGER Co.

WOOSTER, OHIO *Established 1860*

WATER when and where you want it!

with HARODIKES Portable Canvas Water Tanks

THE ECONOMICAL AND EFFICIENT WAY TO CARRY AND STORE WATER.

ON THE JOB - ON THE SPOT KEEPING AMERICA GREEN

EXCLUSIVE FEATURES

- Self Supporting
- Easily Back-packed
- Ideal for Relay Pumping
- Easily Transported

Available in 150 & 300 gallon sizes

A WATER SUPPLY AT THE SCENE OF THE FIRE

Write TODAY for Full Information and Price List

HARODIKES INCORPORATED

NORTH DIGHTON, MASSACHUSETTS

ADVERTISING INDEX

FIRE ENGINEERING

NOVEMBER, 1952

	Page
American District Telegraph Co.	922
American Fire Equipment Co.	960
American-LaFrance-Foamite Corp.	904
American-Marsh Pumps, Inc.	917
American Rubber Mfg. Co.	914
Ames Co., W. R.	947
Ansul Chemical Co., Fire Extinguisher Div.	949; 977
Arguslite Co.	978
Atlas Safety Equipment Co., Inc.	968
Badger Boat Builders	976
Bar-Way Mfg. Co.	954
Bean Div., John; Food Machinery & Chemical Corp.	909
Bendix Radio Div., Bendix Aviation Corp.	918
Blackinton & Co., Inc., V. H.	956
Body Guard Mfg. Co.	980
Braxmar Co., C. G.	966
Briggs & Stratton Corp.	963
C-O-Two Fire Equipment Co.	916
Cairns & Bro.	954
Canton Containers, Inc.	966
Carpenter Manufacturing Co.	983
Chrysler Corp.	910
Circul-Air Corp.	979
Darley & Co., W. S.	976
Dayton Fire Equipment Co.	980
Duo Safety Ladder Corp.	923
E & J Manufacturing Co.	913
Elkhart Brass Mfg. Co., Inc.	911
Emerson Co., J. H.	*Inside Front Cover*
Eureka Fire Hose Div., U. S. Rubber Co.	945
Everson-Ross, Inc.	983
Fabric Fire Hose Co.	903
Federal Enterprises, Inc., Signal Div.	901
Fire-Lite Alarms	978
Foard & Co., F. C.	980
Fogg-It Sales Co.	975
Four Wheel Drive Auto Co.	*Back Cover*
Fulton Bag & Cotton Mills	974
Gamewell Co.	924
General Electric Co.	921
General Fire Hose Co., The	961
General Pacific Corp., The	961
Gerstenslager Company	984
Globe Manufacturing Co.	972
Goodrich Co., B. F.	905
Gorman-Rupp. Co.	975
Hale Fire Pump Co.	952; 970
Harodikes, Inc.	984
Howe Fire Apparatus Co.	964
Janesville Apparel Co.	974
Kidde & Co., Inc., Walter	953
McIntire Brass Works, F. N.	978
Mack Manufacturing Corp.	906
Marine Products Co.	973
Memco Aerial Ladder	981
Midwestern Mfg. Co.	912
Mine Safety Appliance Co.	*Inside Back Cover*
Morning Pride Mfg. Co.	983
Motorola, Inc.	908
Myers & Bro. Co., F. E.	979
National Foam System, Inc.	965
Naval Company	981
Oberdorfer Foundries, Inc.	962
Onan & Sons, Inc., D. W.	970
Pacific Marine Supply Co.	958
Portable Light Co., Inc., The	962
Powhatan Brass & Iron Works	960
Pyrene Mfg. Co.	971
QRS Neon Corp.	968
Quaker Rubber Corp.	951
Radio Apparatus Corp.	967
Radio Corp. of America	969
Randolph Laboratories, Inc.	957
Rockwood Sprinkler Co.	907
Russell Uniform Co.	978
Scott Aviation Corp.	955
Seagrave Corp., The	920
Smith & Co., D. B.	959
Stephenson Corp.	973
Sterling Siren Fire Alarm Co., Inc.	977
U. S. Motors Corp.	983
Ward LaFrance Truck Corp.	915
Wirt & Knox Mfg. Co.	972
Wooster Brass, Div. of Fyr-Fyter Co.	919

Chief H. L. Baldwin, Kansas City, Can Tell You!

You never can tell—when you're groping your way through smoke-filled rooms—when you'll bump your head on a hot electrical wire or charged metal. What happens then depends a lot on what kind of a hat you are wearing . . . as Chief H. L. Baldwin can tell you.

"I was wearing a hat that WASN'T a non-conductor and came in contact with a "hot" wire. It felt like I tore my head off. I got rid of that helmet in a hurry.

"We've since had numerous cases of fire-fighters coming in contact with electric wires while wearing non-conducting helmets. There were no resulting shocks."

You're doubly protected when you wear an M.S.A. Streamlined Fireman's Helmet. Its high dielectric strength safeguards against electrical hazards—and because the laminated bakelite is non-absorbent, this protection isn't affected by moisture conditions. The one-piece, high pressure molded construction takes bumps and blows without passing them on. (Many reports on record such as: a brick fell 45 feet and hit an M.S.A. helmet. No injury to the wearer—only a slight scratch on the helmet.) And finally, the streamlined design has eye appeal, and the rubber-cushioned lining provides greater wearing comfort. Easily zipped-in winter lining assures all-weather comfort. Ask for Bulletin DX-8, for full details.

Chief H. L. Baldwin wearing his shock-proof M.S.A. Helmet. The Kansas City, Mo., department has standardized on this proved head protection.

MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STS., PITTSBURGH 8, PA.

At Your Service

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA.

Call the M.S.A. man on your every safety problem . . . his job is to help you

MSA

SAFETY EQUIPMENT HEADQUARTERS

Four more Nebraska fire districts choose

FWD

Performance is the key to preference. That's why more and more Nebraska communities are specifying FWD. They know that FWD fire trucks help provide outstanding fire and disaster protection.

HUMPHREY — CRAWFORD

HOWELLS — GRAND ISLAND

Choose the Added Protection of Extra Traction to protect your community

Throughout the nation, the trend is to FWD Fire Engines. In both rural and urban communities, crews know they can depend on four-wheel-drive traction to help save time on every run. FWD provides maximum safety for crews, equipment *and* other vehicles. FWD equipment and accessories also deliver extra action and dependability at the blaze.

Write for the new book—"FWD Fire Engines." It pictures and describes the types of FWD equipment selected by many typical progressive communities. Helps you select equipment for your specific needs.

THIS IS WHY YOU NEED FWD EXTRA-TRACTION

SAFER CONTROL IN TRAFFIC — Start faster. Positive control permits greater speed. Avoid accidents because 4-wheel-drive assures superior steering.

REACH OUT-OF-THE-WAY PLACES — Get through to water supply in hard-to-reach sections. Drive over terrain that stops the conventional fire truck.

FULL CONTROL ON SNOW AND ICE — With front wheels pulling and back wheels pushing—drive swiftly, safely over icy or snow-blocked streets and roads.

STEEP GRADES, MUD, SAND NO OBSTACLE — Drive hub deep through sand or mud. Pull up steep, slippery grades without losing speed. Save valuable time.

Built by the Makers of America's Foremost Heavy-Duty Trucks

THE FOUR WHEEL DRIVE AUTO CO., CLINTONVILLE, WIS., *Canadian Factory:* KITCHENER, ONT.

ts

NO
deep
l up
thout
time.

NT.